

FIG. 1

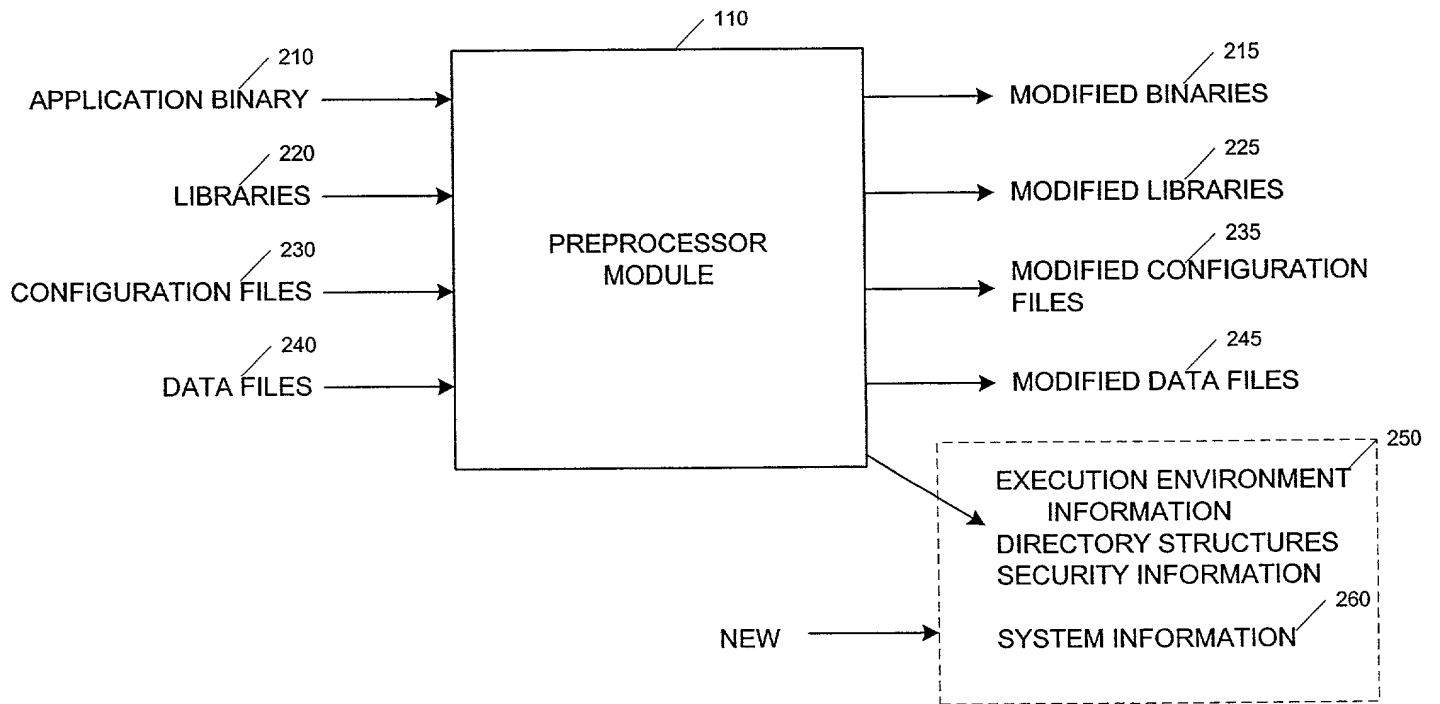


FIG. 2

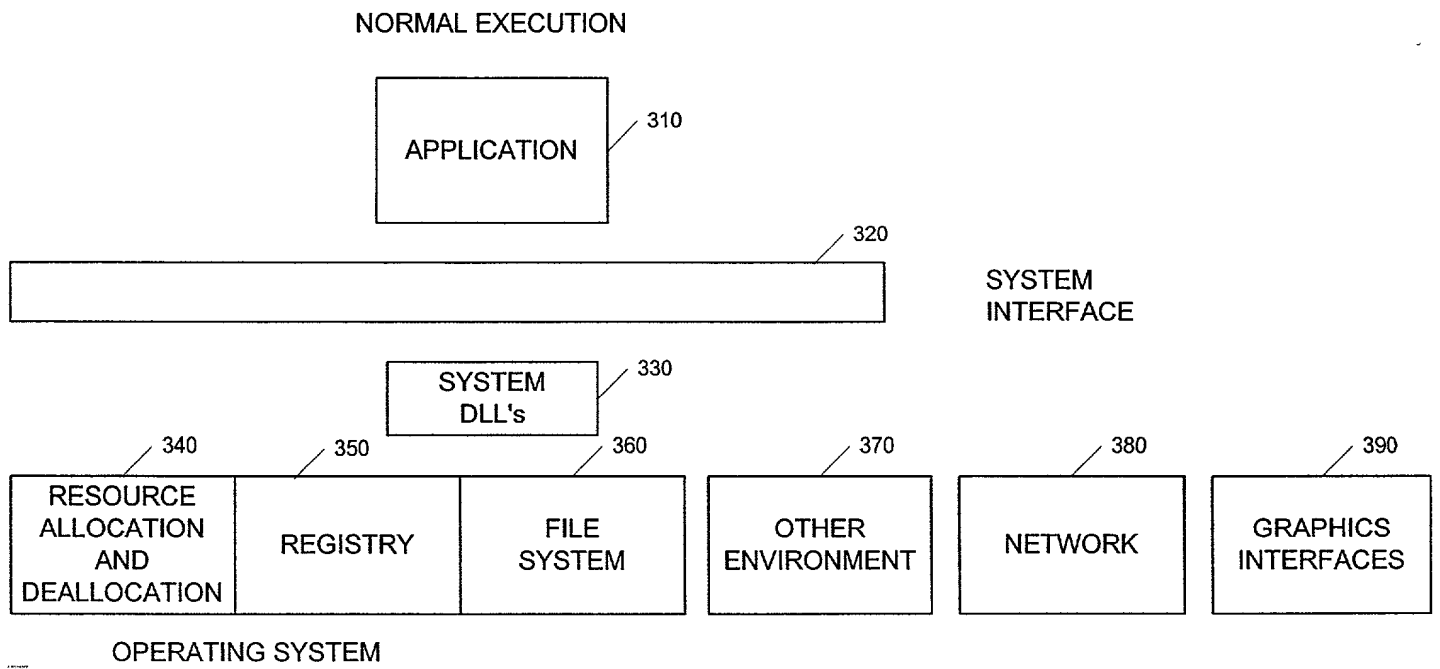


FIG. 3

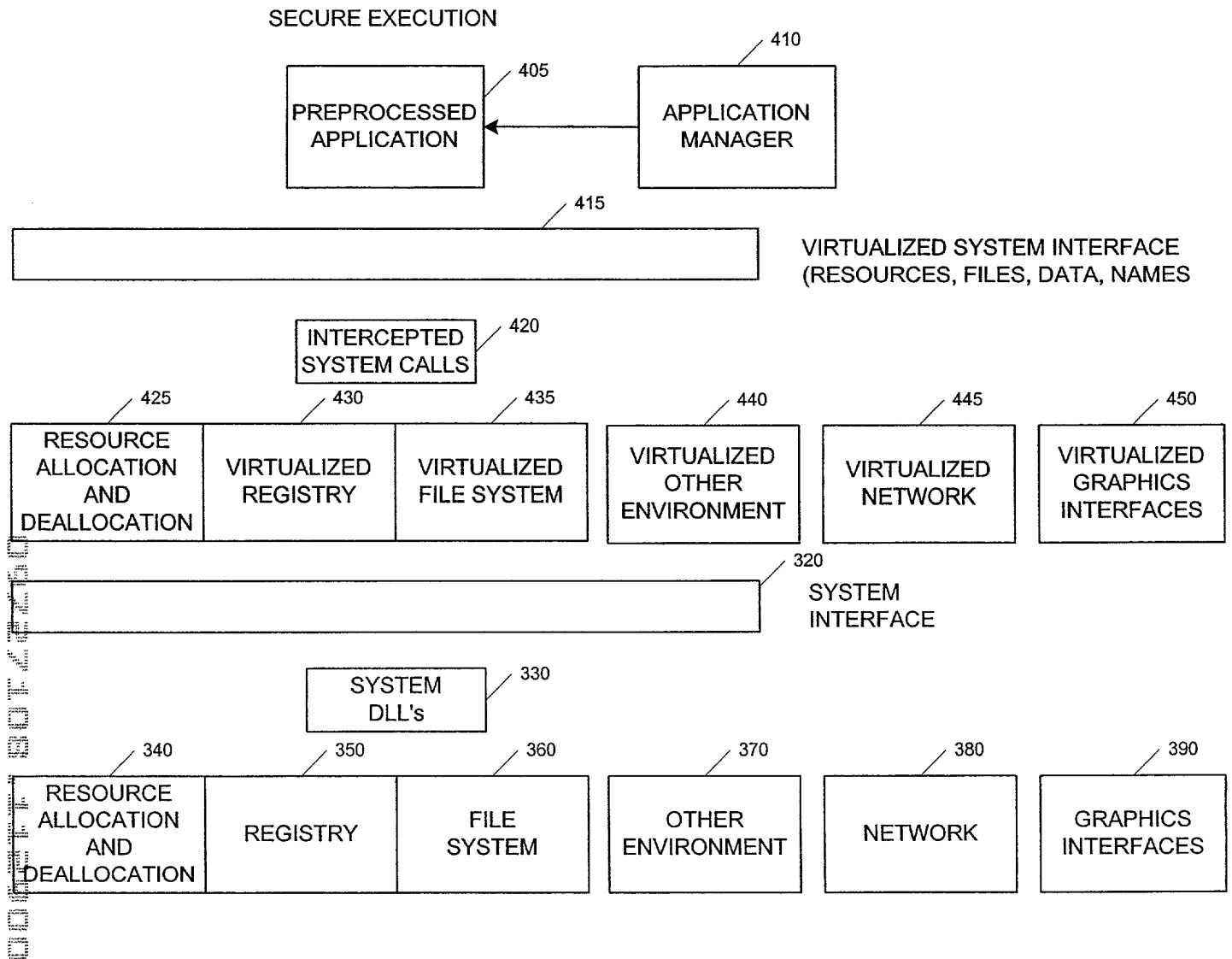


FIG. 4

```
graph TD; BEGIN([BEGIN]) --> 510[COMPILE SOURCE CODE INTO OBJECT CODE]; 510 --> 520[A PREPROCESS APPLICATION PACKAGE FOR EXECUTION IN THE SECURE CLIENT ENVIRONMENT]; 520 --> 530[APPLICATION MANAGER ON CLIENT RETRIEVES MODIFIED OBJECT CODE FROM SERVER]; 530 --> 540[B INITIALIZE APPLICATION PACKAGE AND PATCH LIBRARIES]; 540 --> 550[C VIRTUALIZE INTERCEPTED CALLS DURING EXECUTION]; 550 --> 560[TRANSMIT RESULTS TO SERVER]; 560 --> RETURN([RETURN]);
```

The flowchart illustrates the process of executing an application in a secure client environment. It begins with a 'BEGIN' terminal, followed by a process block '510' for compiling source code into object code. This leads to process block '520', which is labeled 'A' and involves preprocessing the application package for execution in the secure client environment. The next step is process block '530', where the application manager on the client retrieves modified object code from the server. This is followed by process block '540', labeled 'B', for initializing the application package and patching libraries. Then, process block '550', labeled 'C', involves virtualizing intercepted calls during execution. The final process block is '560' for transmitting results to the server, which leads to a 'RETURN' terminal.

FIG. 5

A 520

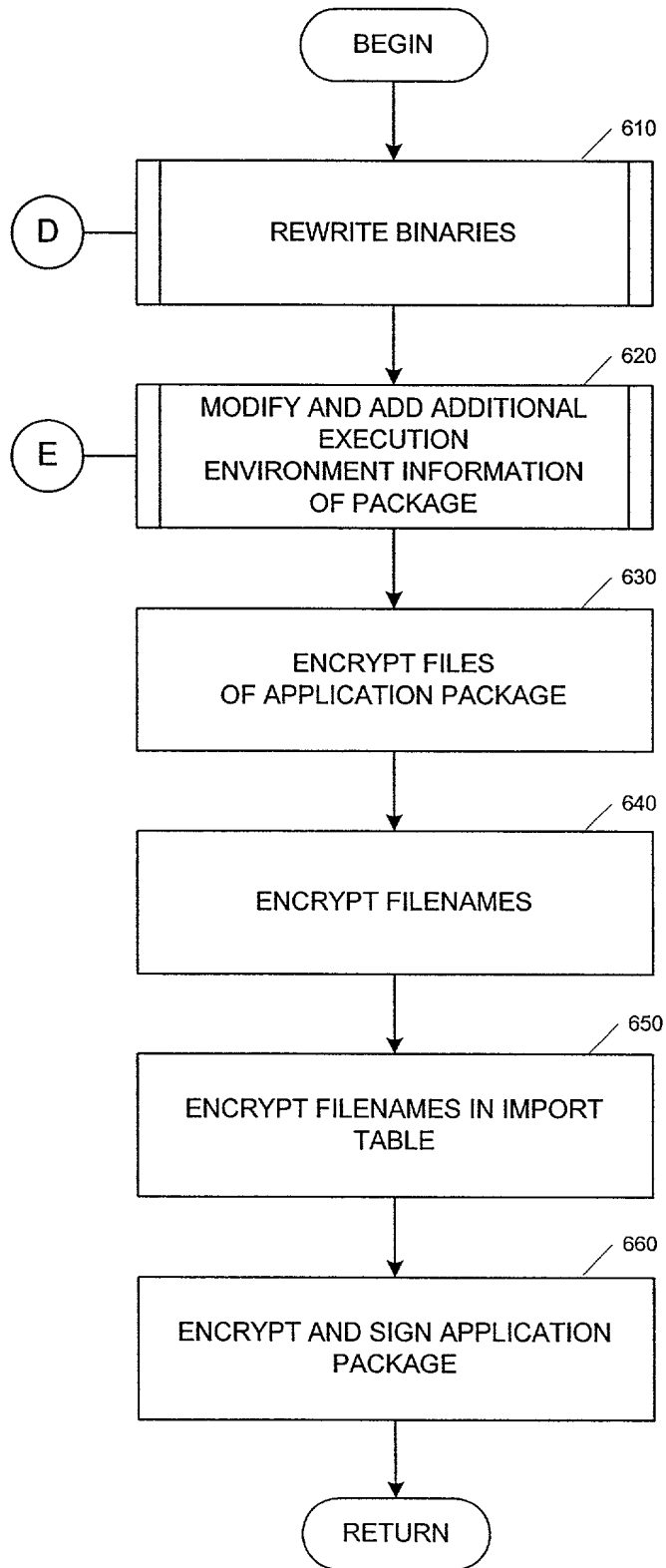


FIG. 6

D 610

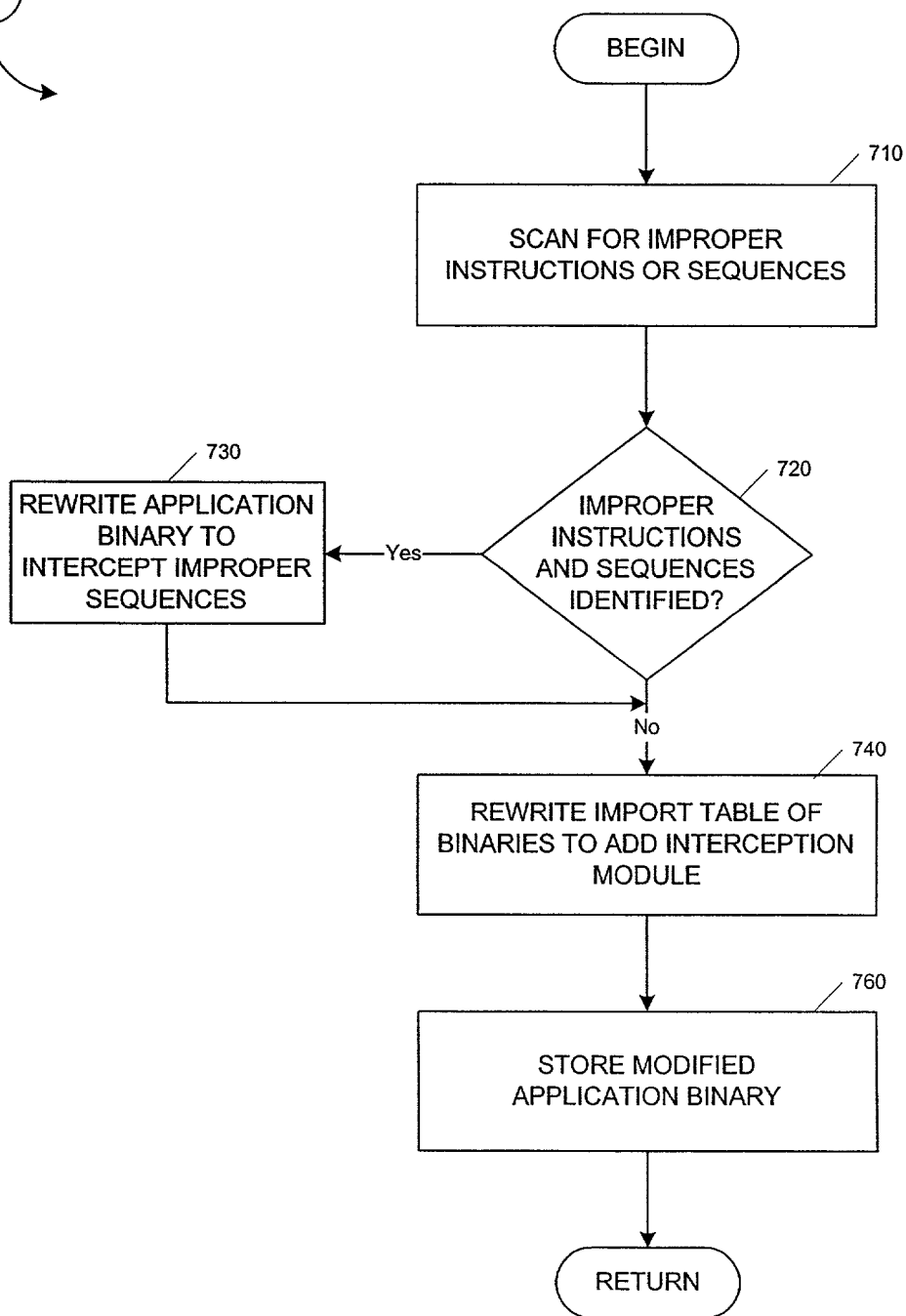
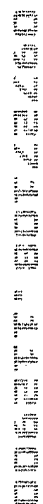


FIG. 7

620



a) α = 0.05		b) α = 0.01	
1	0.0500	0.0100	0.0050
2	0.0250	0.0050	0.0025
3	0.0167	0.0033	0.0017
4	0.0125	0.0025	0.0013
5	0.0100	0.0020	0.0010
6	0.0083	0.0017	0.0008
7	0.0071	0.0015	0.0007
8	0.0063	0.0013	0.0006
9	0.0056	0.0011	0.0005
10	0.0050	0.0010	0.0004
11	0.0045	0.0009	0.0004
12	0.0042	0.0008	0.0003
13	0.0038	0.0007	0.0003
14	0.0036	0.0006	0.0002
15	0.0033	0.0005	0.0002
16	0.0031	0.0004	0.0002
17	0.0029	0.0004	0.0001
18	0.0027	0.0003	0.0001
19	0.0026	0.0003	0.0001
20	0.0025	0.0002	0.0001
21	0.0024	0.0002	0.0001
22	0.0023	0.0002	0.0001
23	0.0022	0.0001	0.0001
24	0.0021	0.0001	0.0001
25	0.0020	0.0001	0.0001
26	0.0019	0.0001	0.0001
27	0.0018	0.0001	0.0001
28	0.0017	0.0001	0.0001
29	0.0016	0.0001	0.0001
30	0.0015	0.0001	0.0001
31	0.0014	0.0001	0.0001
32	0.0013	0.0001	0.0001
33	0.0012	0.0001	0.0001
34	0.0011	0.0001	0.0001
35	0.0010	0.0001	0.0001
36	0.0009	0.0001	0.0001
37	0.0008	0.0001	0.0001
38	0.0007	0.0001	0.0001
39	0.0006	0.0001	0.0001
40	0.0005	0.0001	0.0001
41	0.0004	0.0001	0.0001
42	0.0003	0.0001	0.0001
43	0.0002	0.0001	0.0001
44	0.0001	0.0001	0.0001
45	0.0001	0.0001	0.0001
46	0.0001	0.0001	0.0001
47	0.0001	0.0001	0.0001
48	0.0001	0.0001	0.0001
49	0.0001	0.0001	0.0001
50	0.0001	0.0001	0.0001

B 540

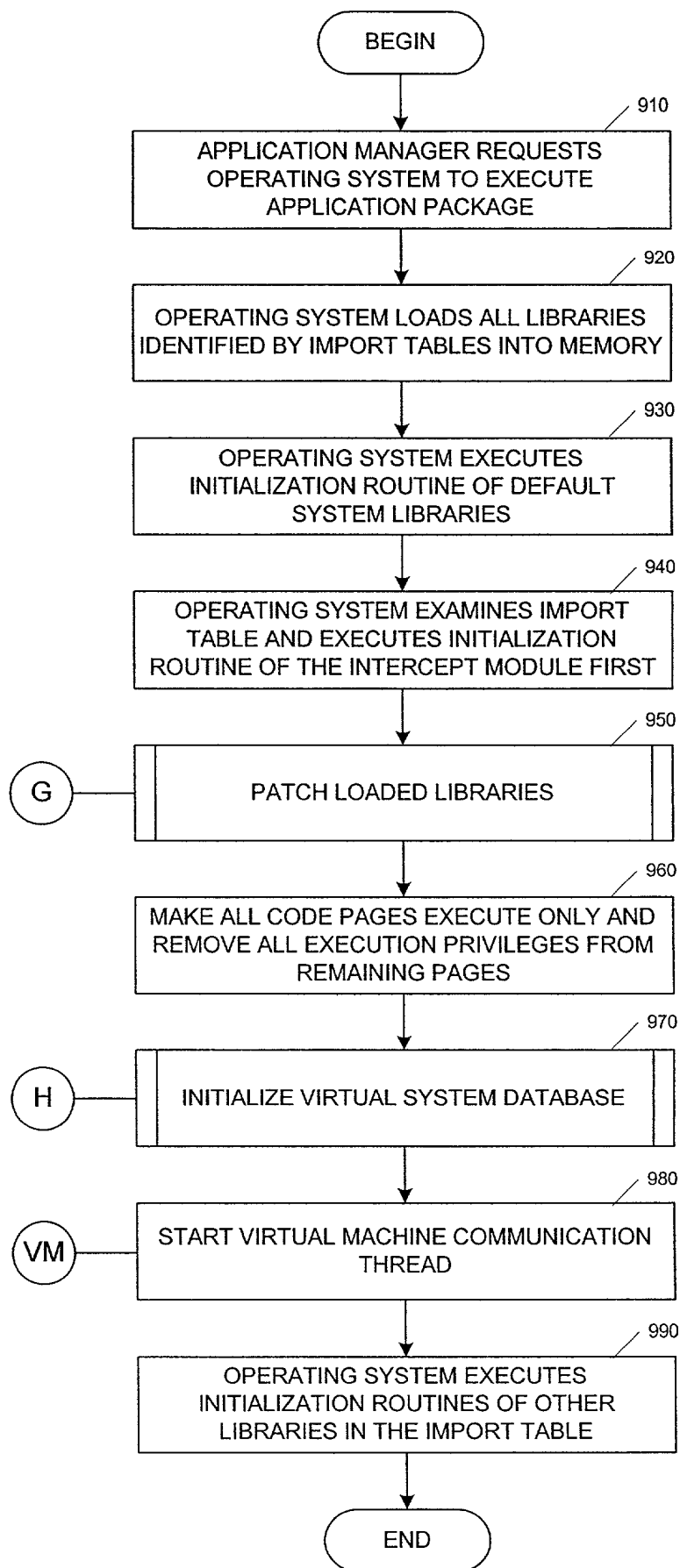


FIG. 9

G 950

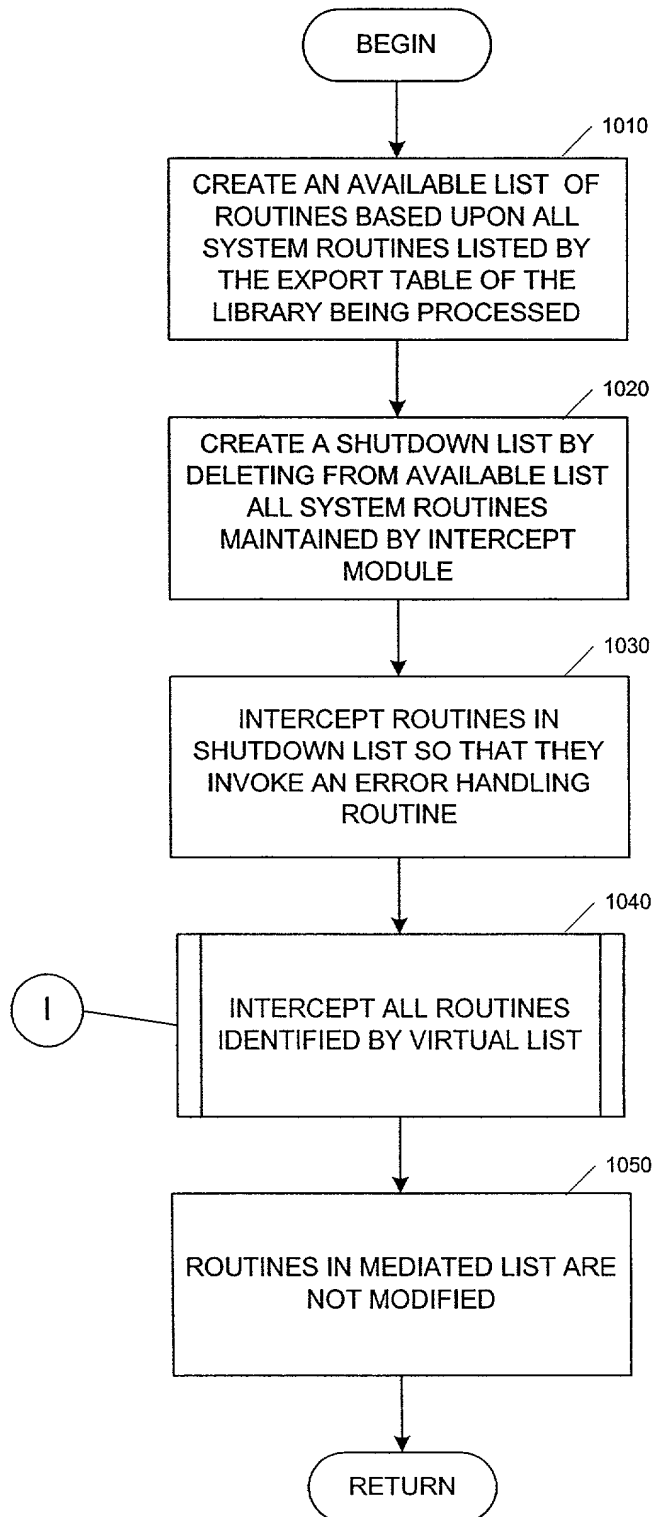


FIG. 10

1040

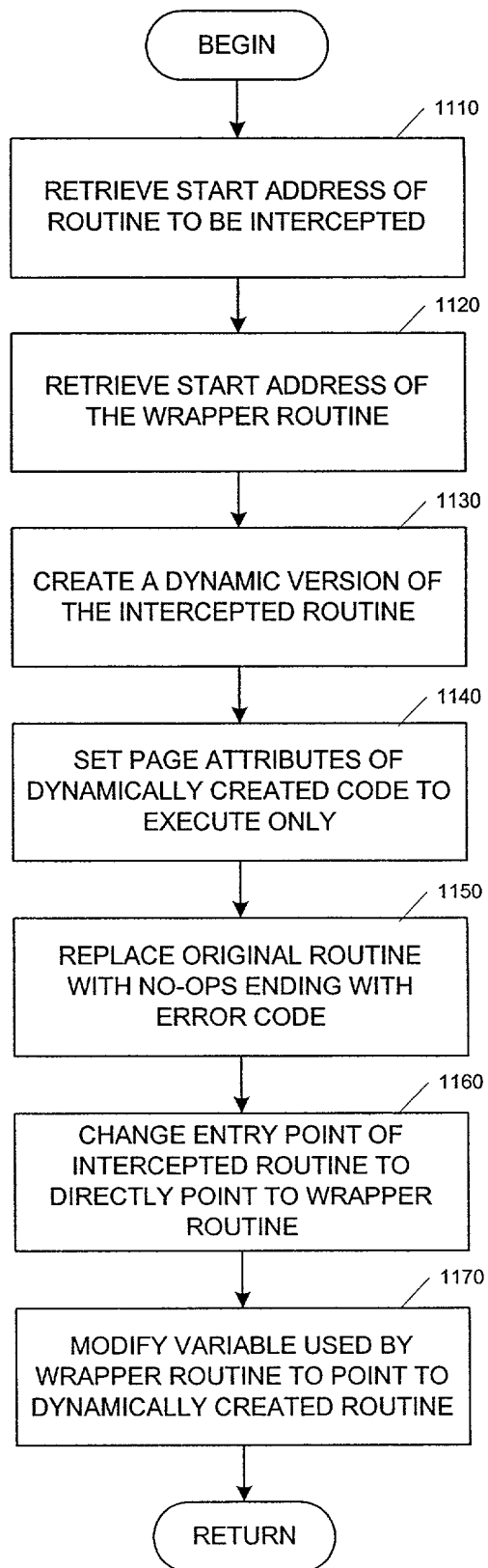


FIG. 11

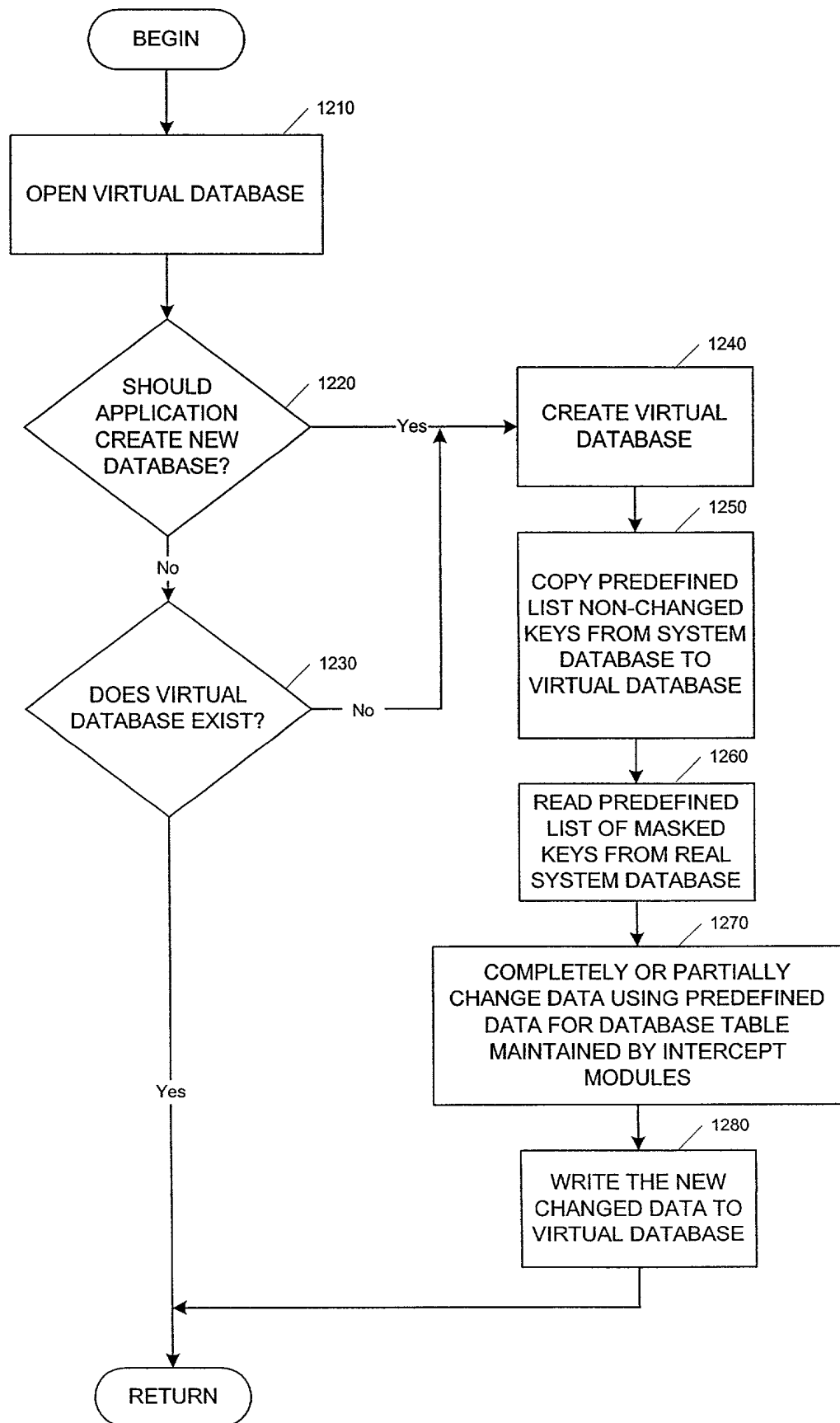


FIG. 12

C 550

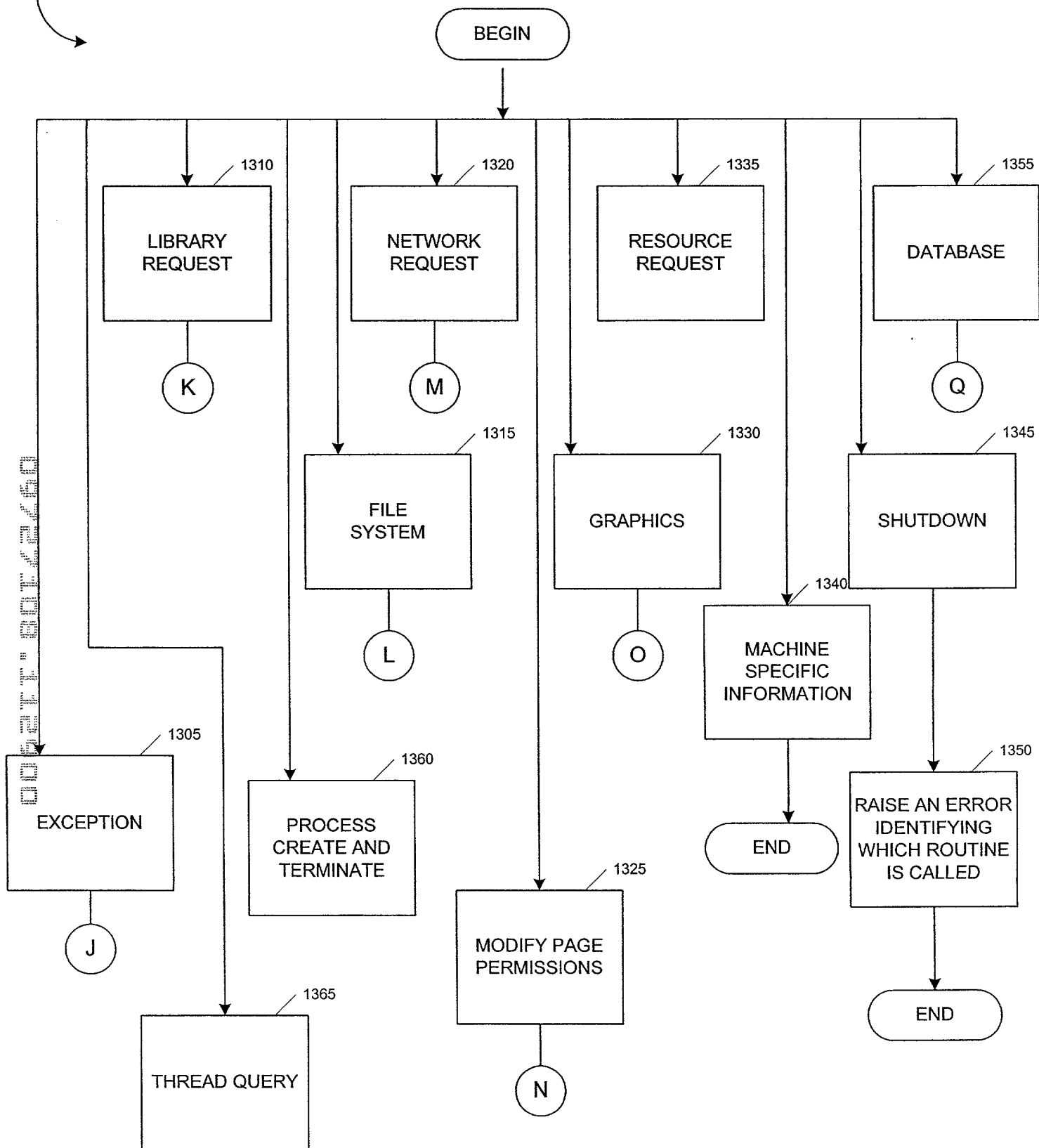


FIG. 13

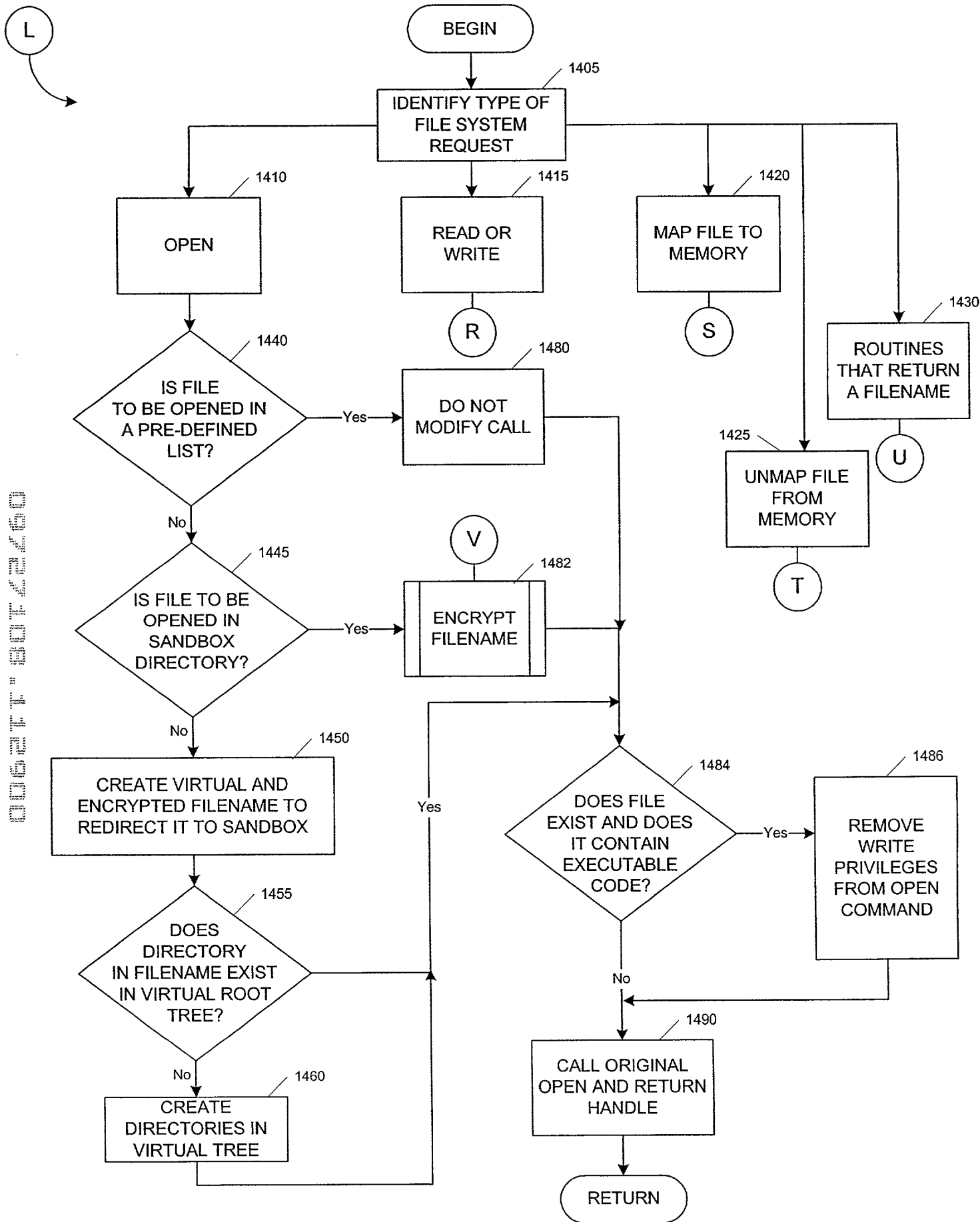


FIG. 14

J

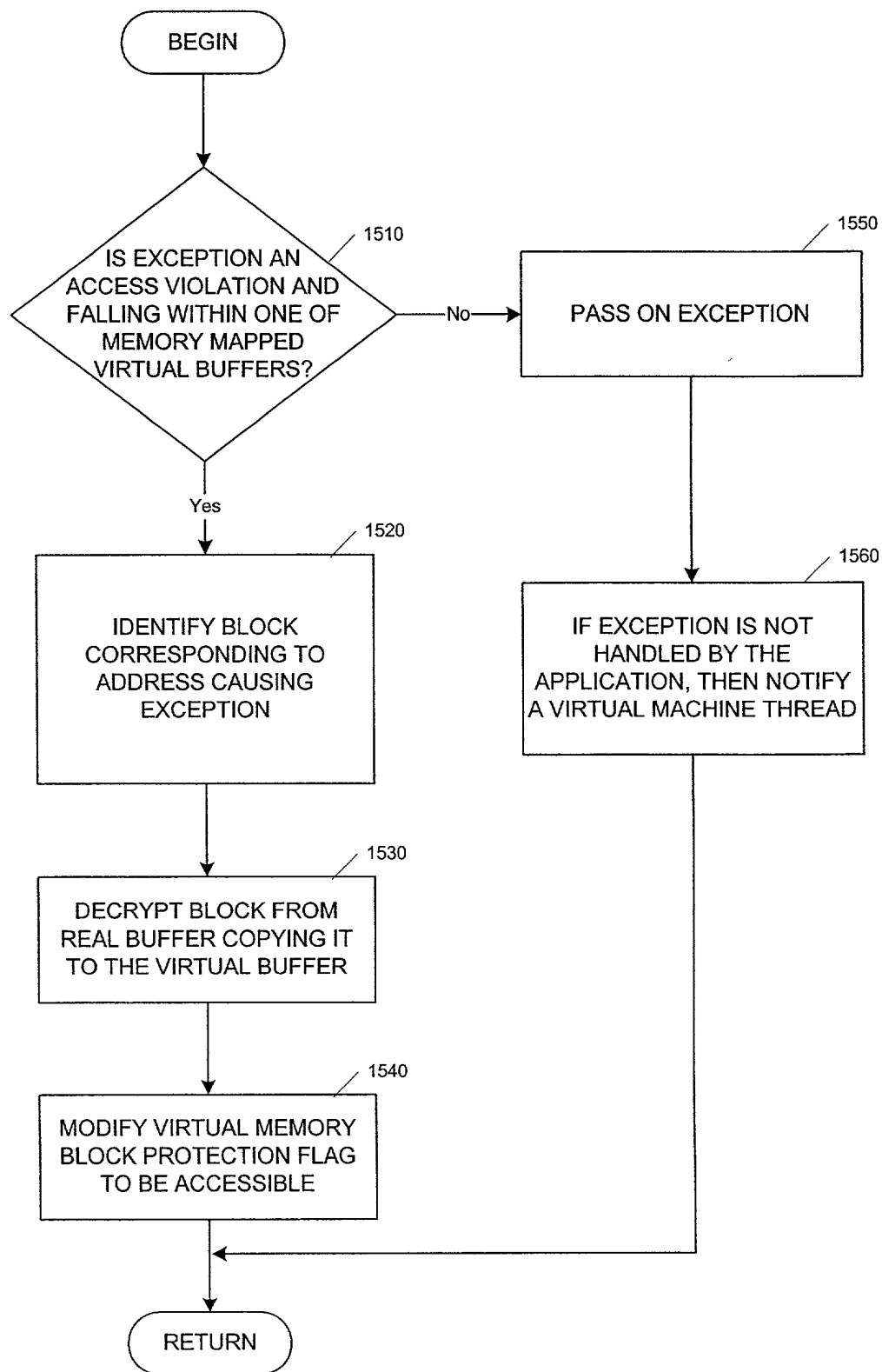
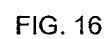


FIG. 15



IMP

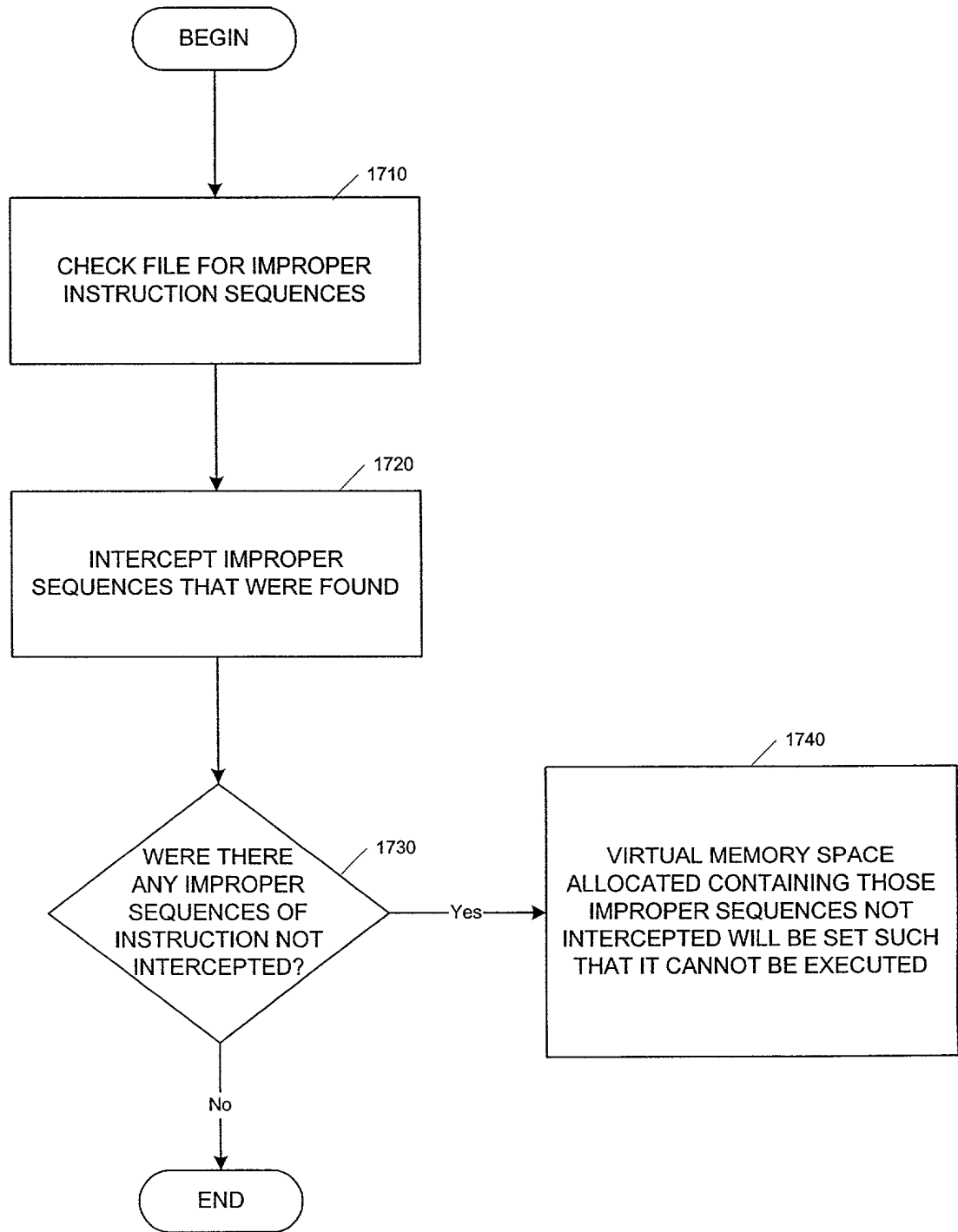


FIG. 17

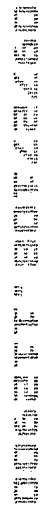


FIG. 18

AAA

005227-1300

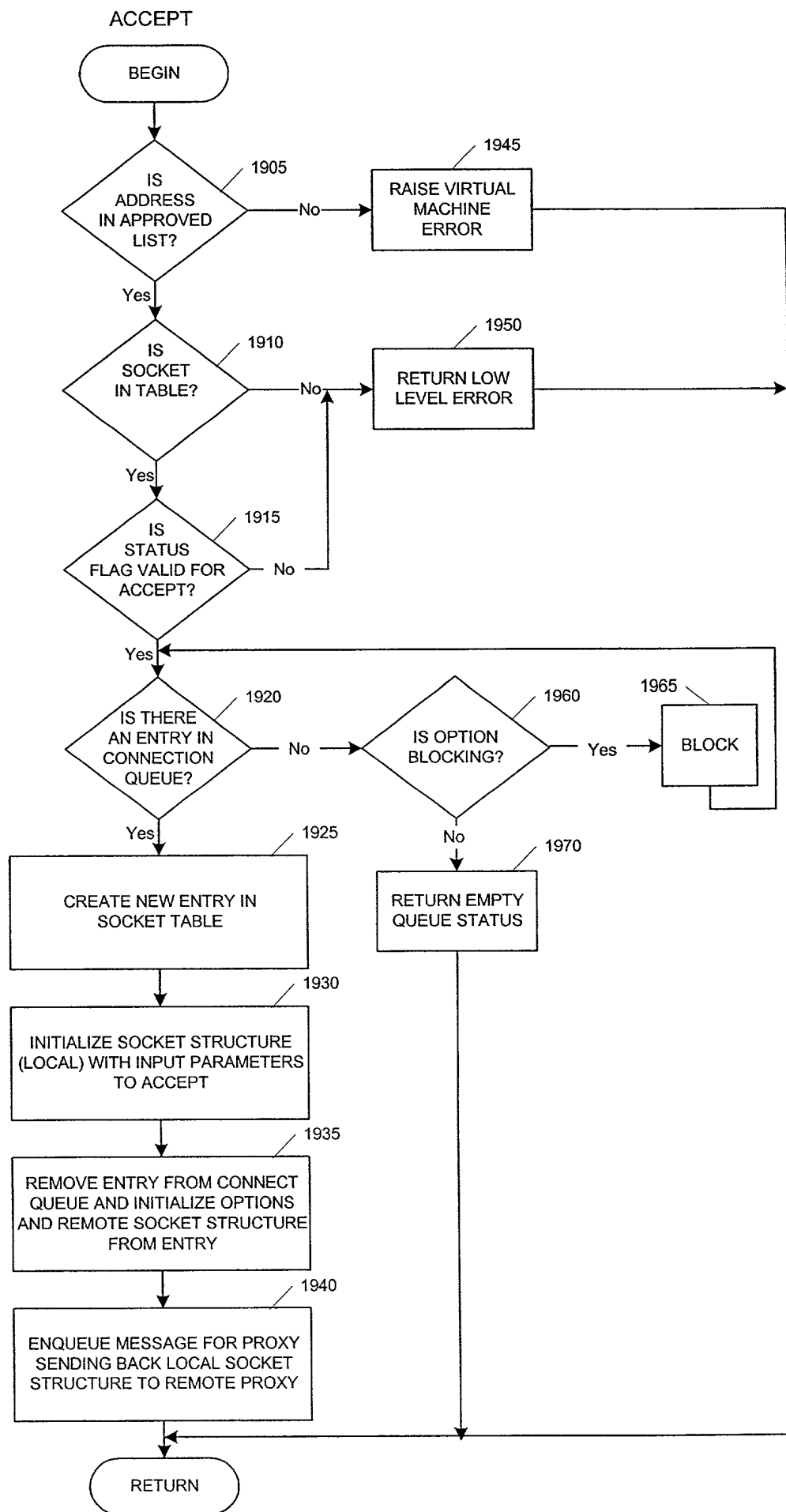


FIG. 19

BBB

00621" 801260

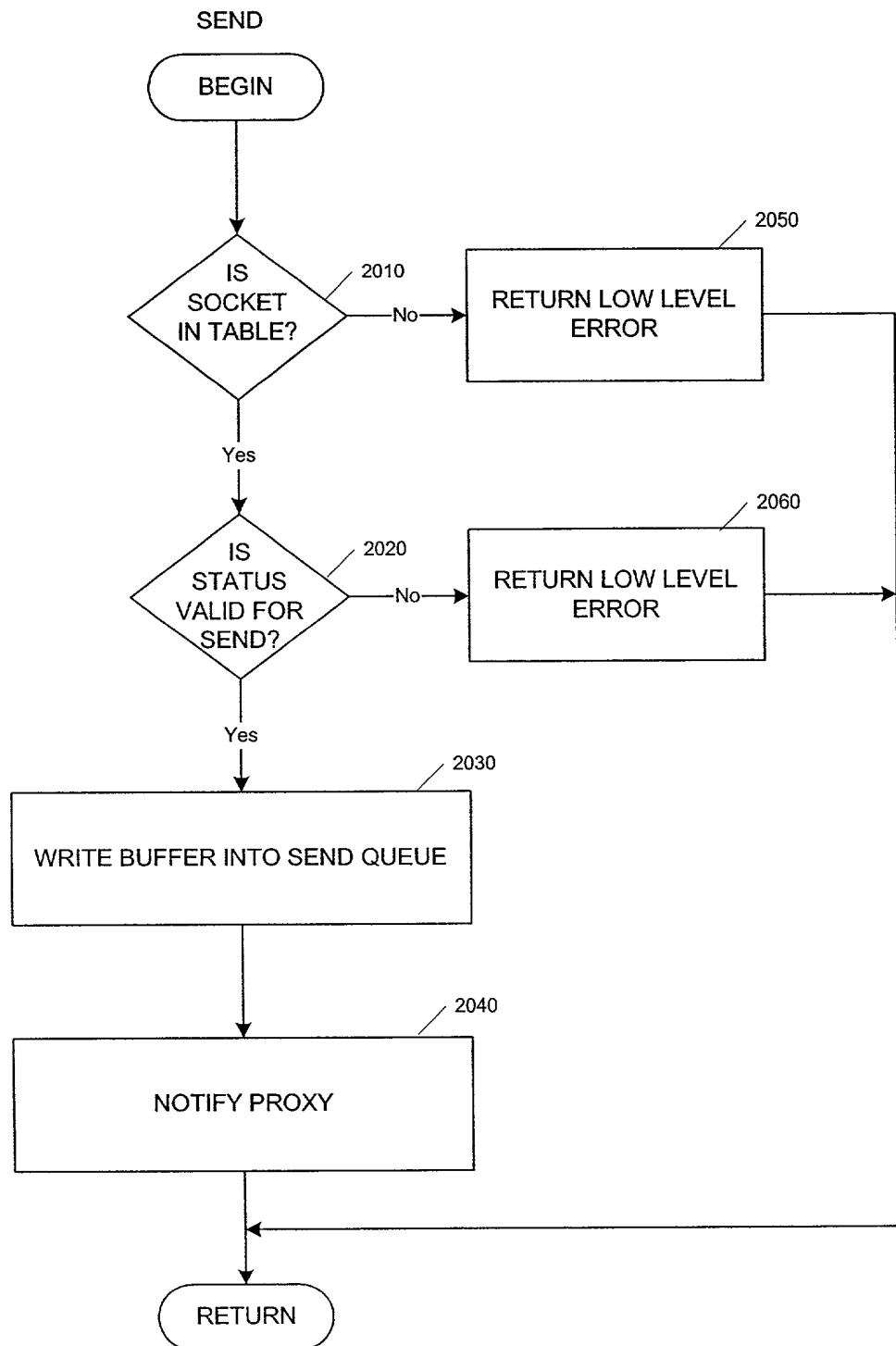


FIG. 20

CCC

00621100 00621100

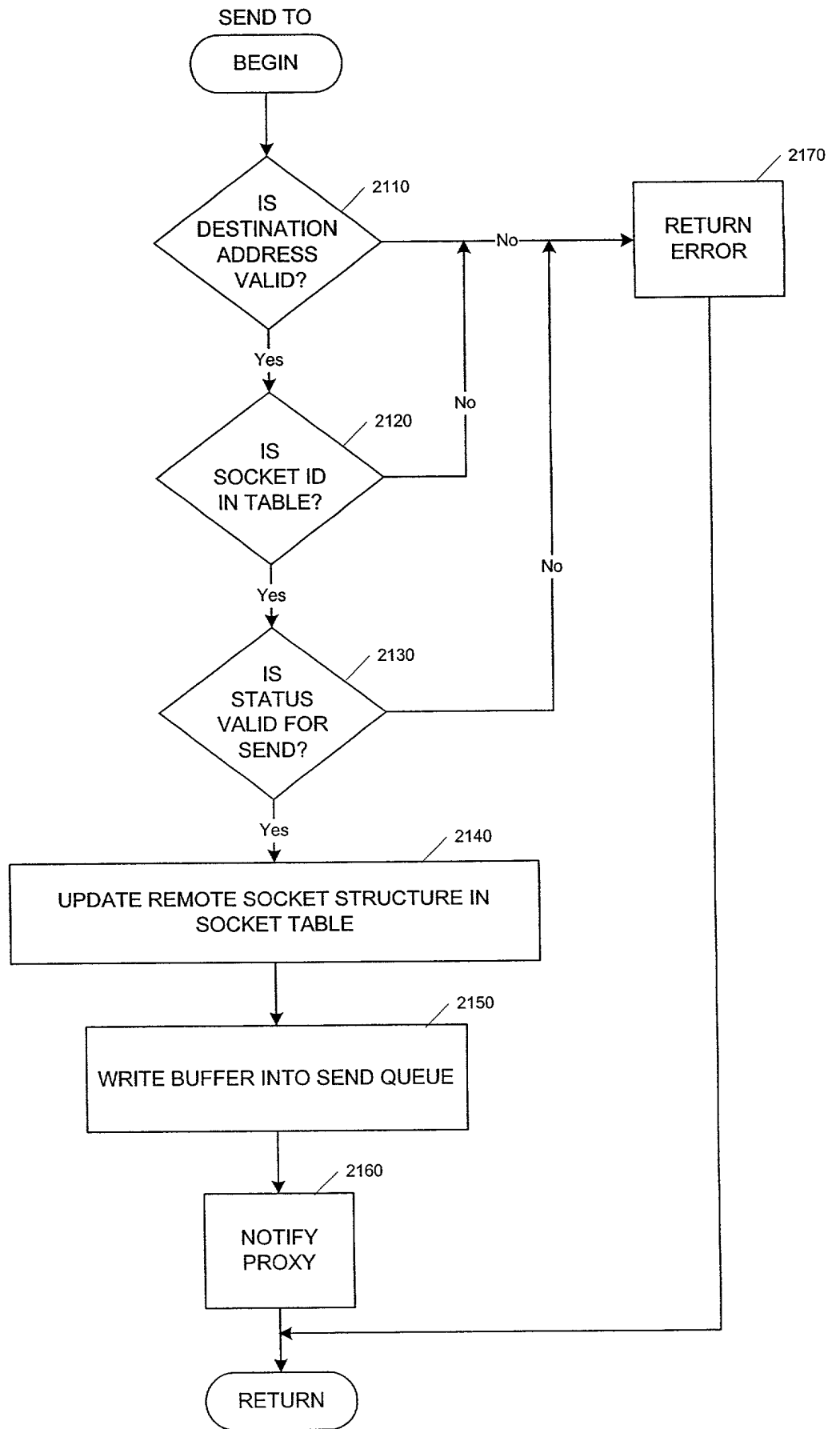


FIG. 21

DDD

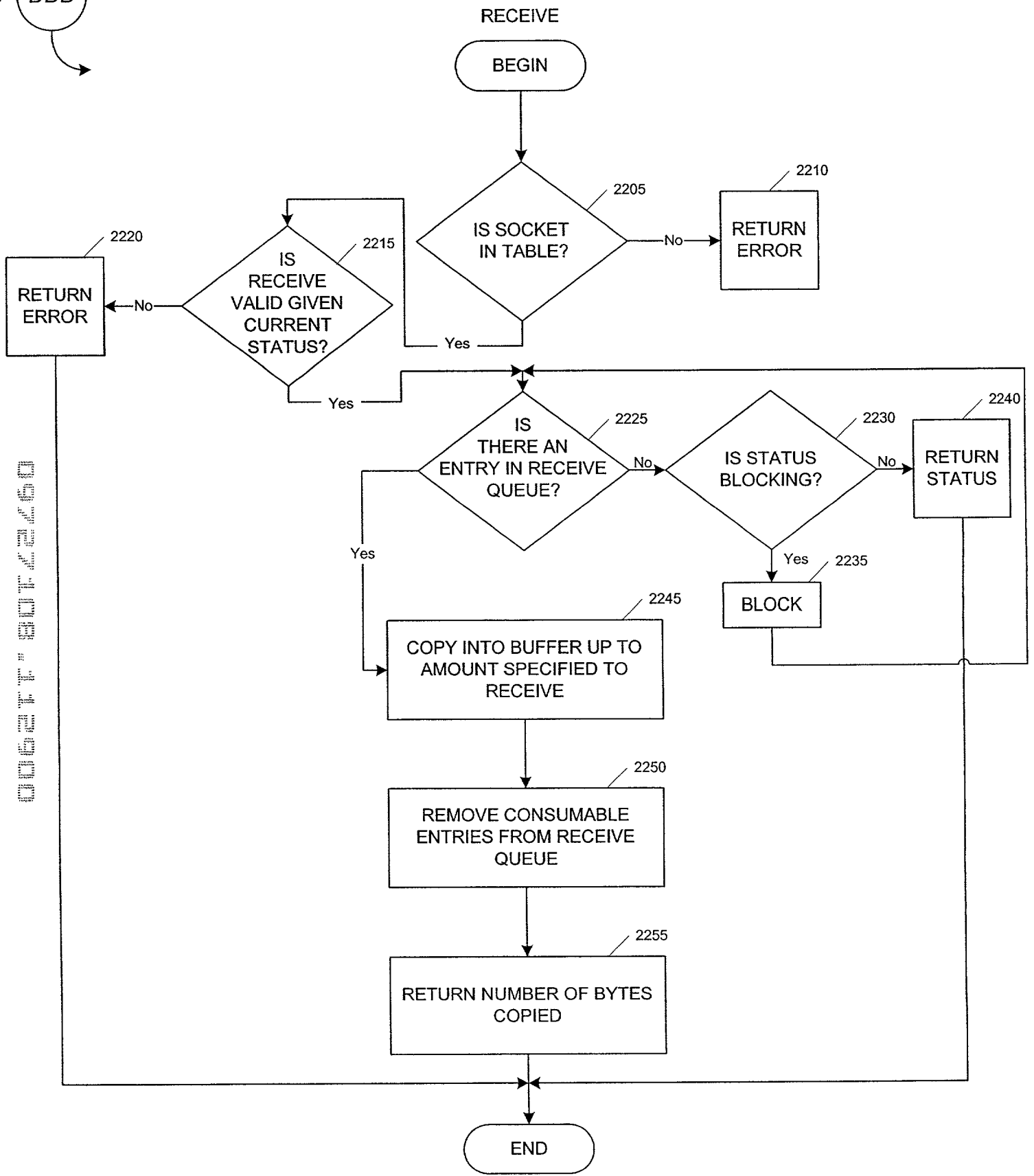


FIG. 22

EEE

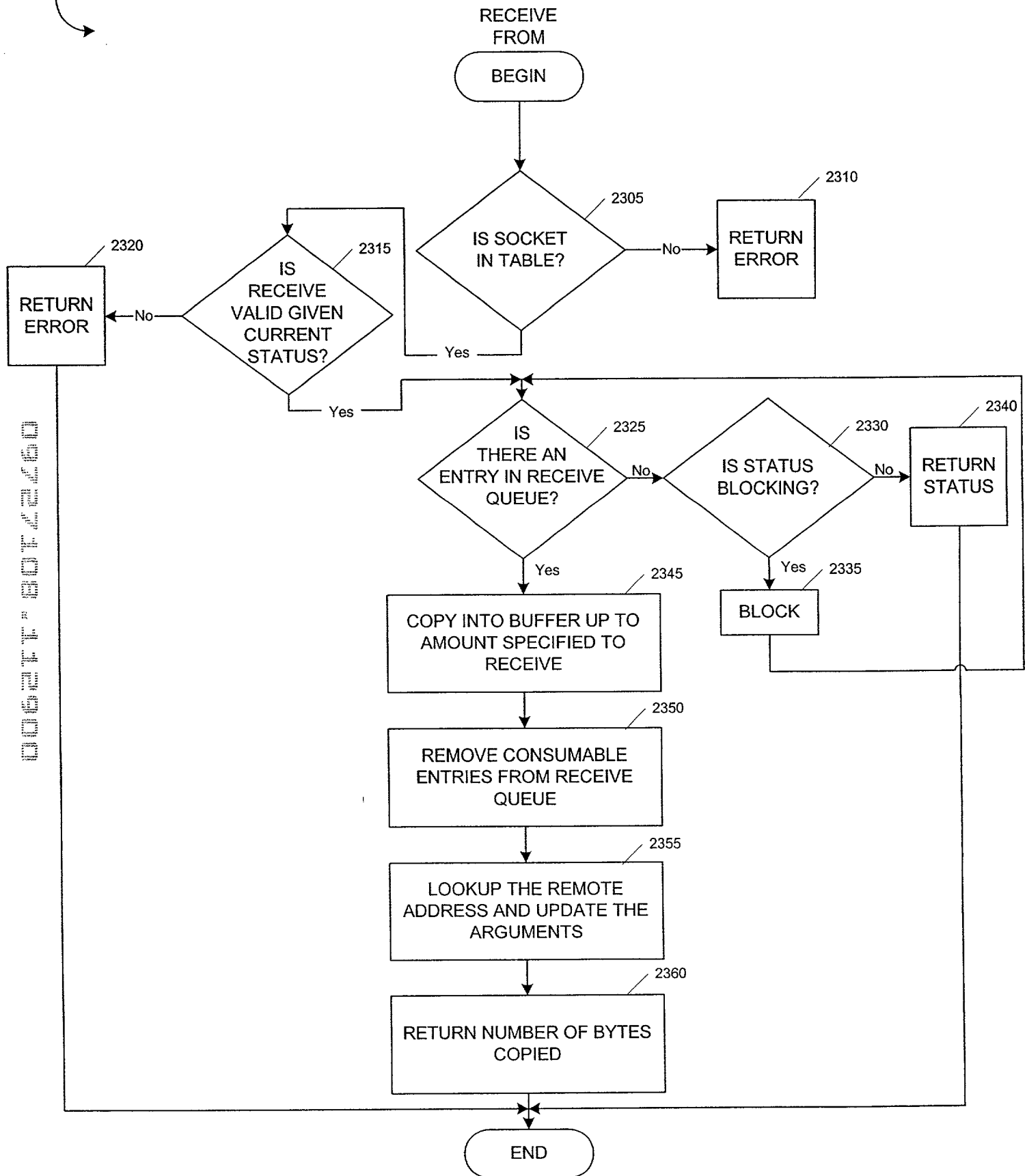


FIG. 23

Variable	Mean	SD	Min	Max
Age	34.5	10.2	21	55
Gender	0.5	0.5	0	1
Marital status	0.6	0.5	0	1
Education	12.5	1.5	9	16
Income	1500	500	500	3000
Health status	0.8	0.2	0	1
Employment status	0.7	0.4	0	1
Family size	3.2	1.1	1	6
Urban/rural	0.4	0.5	0	1
Religion	0.3	0.5	0	1
Political affiliation	0.2	0.4	0	1
Home ownership	0.6	0.5	0	1
Vehicle ownership	0.3	0.5	0	1
Internet usage	0.5	0.5	0	1
Smartphone usage	0.7	0.4	0	1
Travel frequency	0.4	0.5	0	1
Health insurance	0.9	0.1	0	1
Life satisfaction	0.6	0.3	0	1
Stress level	0.5	0.4	0	1
Work-life balance	0.4	0.5	0	1
Community involvement	0.3	0.5	0	1
Volunteering frequency	0.2	0.4	0	1
Charitable donations	0.1	0.3	0	1
Political participation	0.2	0.4	0	1
Environmental awareness	0.4	0.5	0	1
Sustainable consumption	0.3	0.5	0	1
Local food consumption	0.2	0.4	0	1
Recycling behavior	0.4	0.5	0	1
Energy conservation	0.3	0.5	0	1
Water conservation	0.4	0.5	0	1
Waste management	0.3	0.5	0	1
Green building	0.2	0.4	0	1
Renewable energy	0.1	0.3	0	1
Carbon footprint	0.2	0.4	0	1
Climate change concern	0.5	0.5	0	1
Environmental activism	0.2	0.4	0	1
Pro-environmental behavior	0.3	0.5	0	1
Pro-social behavior	0.4	0.5	0	1
Altruism	0.3	0.5	0	1
Empathy	0.4	0.5	0	1
Cooperation	0.3	0.5	0	1
Trust	0.4	0.5	0	1
Helpfulness	0.3	0.5	0	1
Generosity	0.2	0.4	0	1
Kindness	0.3	0.5	0	1
Compassion	0.4	0.5	0	1
Forgiveness	0.3	0.5	0	1
Patience	0.4	0.5	0	1
Self-control	0.3	0.5	0	1
Emotional stability	0.4	0.5	0	1
Conscientiousness	0.3	0.5	0	1
Openness	0.4	0.5	0	1
Agreeableness	0.3	0.5	0	1
Neuroticism	0.2	0.4	0	1
Extraversion	0.3	0.5	0	1
Conscientiousness	0.3	0.5	0	1
Openness	0.4	0.5	0	1
Agreeableness	0.3	0.5	0	1
Neuroticism	0.2	0.4	0	1
Extraversion	0.3	0.5	0	1

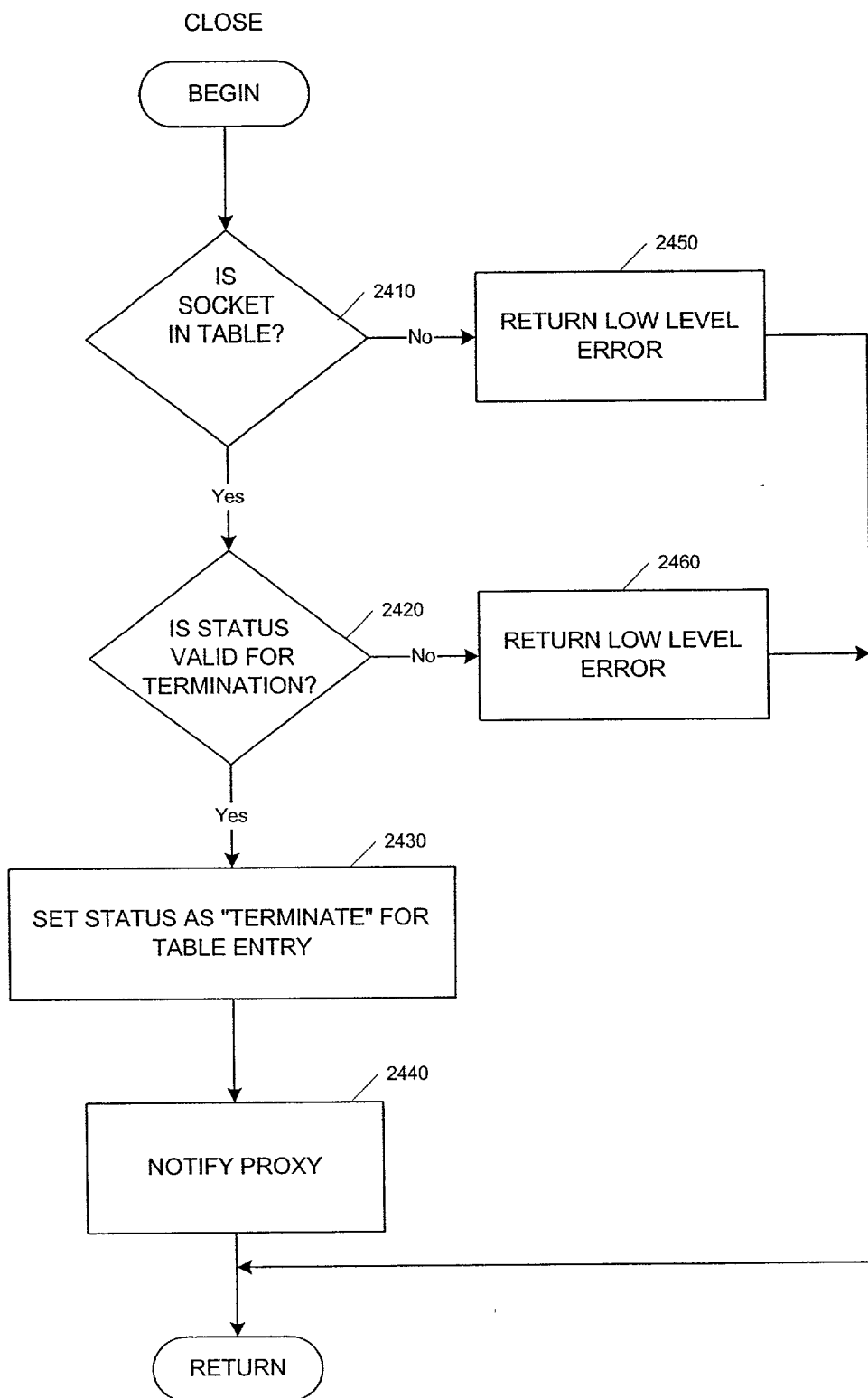


FIG. 24

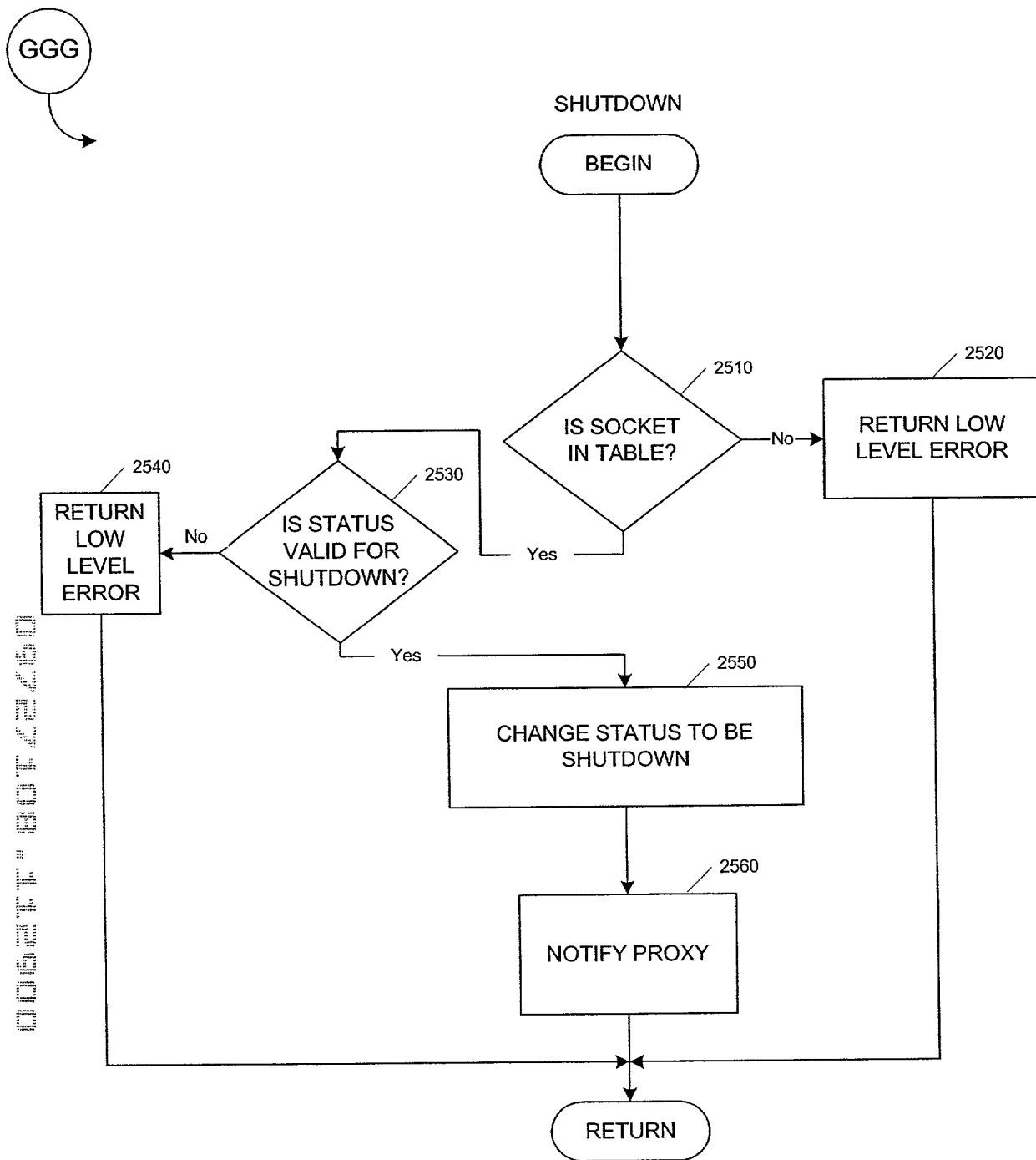


FIG. 25

HHH

SELECT

BEGIN

WAIT FOR SPECIFIED DELAY TIME
TO EXPIRE

GIVEN LIST(S) OF SOCKETS, FIND
ALL SOCKET MEETING A GIVEN
CONDITION

MODIFY SOCKET LIST BASED ON
QUERY

RETURN NUMBER OF SOCKETS
THAT MEET CONDITION

END

FIG. 26

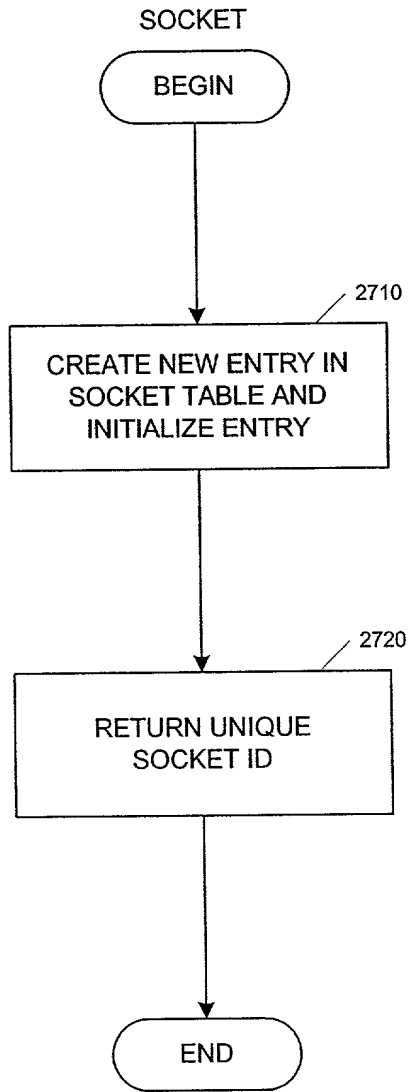
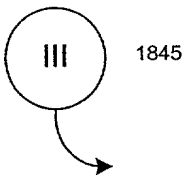


FIG. 27

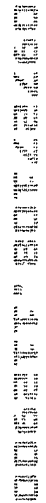


FIG. 28

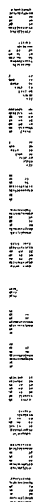
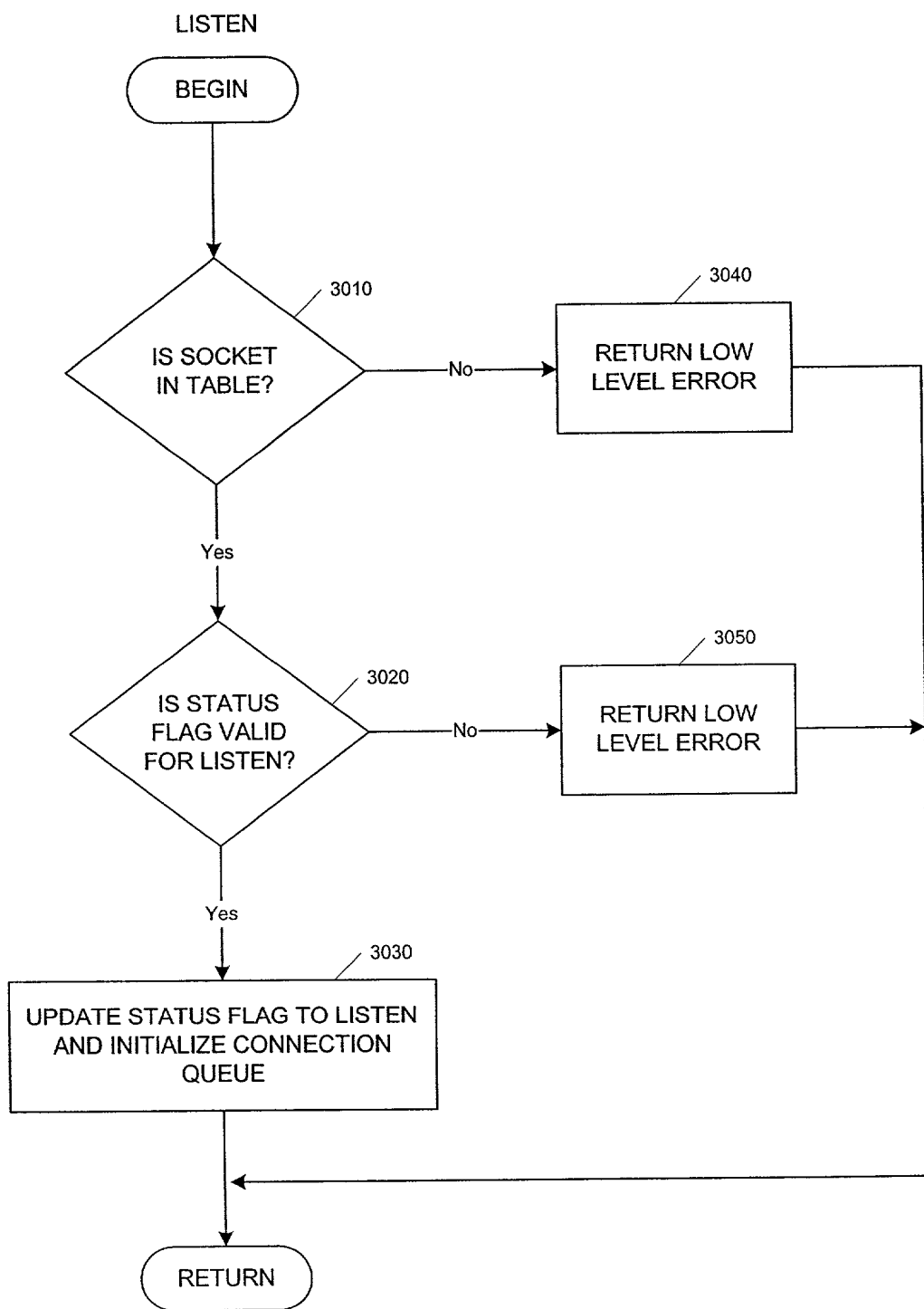


FIG. 29

1. <i>in vitro</i> (Hagedorn)	
200	100
100	50
50	25
25	12.5
12.5	6.25
6.25	3.125
3.125	1.5625
1.5625	0.78125
0.78125	0.390625
0.390625	0.1953125
0.1953125	0.09765625
0.09765625	0.048828125
0.048828125	0.0244140625
0.0244140625	0.01220703125
0.01220703125	0.006103515625
0.006103515625	0.0030517578125
0.0030517578125	0.00152587890625
0.00152587890625	0.000762939453125
0.000762939453125	0.0003814697265625
0.0003814697265625	0.00019073486328125
0.00019073486328125	9.5367431640625e-05
9.5367431640625e-05	4.76837158203125e-05
4.76837158203125e-05	2.384185791015625e-05
2.384185791015625e-05	1.1920928955078125e-05
1.1920928955078125e-05	5.9604644775390625e-06
5.9604644775390625e-06	2.980232238769531e-06
2.980232238769531e-06	1.4901161193847656e-06
1.4901161193847656e-06	7.450580596923828e-07
7.450580596923828e-07	3.725290298461914e-07
3.725290298461914e-07	1.862645149230957e-07
1.862645149230957e-07	9.313225746154785e-08
9.313225746154785e-08	4.656612873077392e-08
4.656612873077392e-08	2.328306436538696e-08
2.328306436538696e-08	1.164153218269348e-08
1.164153218269348e-08	5.82076609134674e-09
5.82076609134674e-09	2.91038304567337e-09
2.91038304567337e-09	1.455191522836685e-09
1.455191522836685e-09	7.275957614183425e-10
7.275957614183425e-10	3.637978807091712e-10
3.637978807091712e-10	1.818989403545856e-10
1.818989403545856e-10	9.09494701772928e-11
9.09494701772928e-11	4.54747350886464e-11
4.54747350886464e-11	2.27373675443232e-11
2.27373675443232e-11	1.13686837721616e-11
1.13686837721616e-11	5.6843418860808e-12
5.6843418860808e-12	2.8421709430404e-12
2.8421709430404e-12	1.4210854715202e-12
1.4210854715202e-12	7.105427357601e-13
7.105427357601e-13	3.5527136788005e-13
3.5527136788005e-13	1.77635683940025e-13
1.77635683940025e-13	8.88178419700125e-14
8.88178419700125e-14	4.440892098500625e-14
4.440892098500625e-14	2.2204460492503125e-14
2.2204460492503125e-14	1.11022302462515625e-14
1.11022302462515625e-14	5.551115123125781e-15
5.551115123125781e-15	2.7755575615628906e-15
2.7755575615628906e-15	1.3877787807814453e-15
1.3877787807814453e-15	6.9388939039072265e-16
6.9388939039072265e-16	3.469446951953613e-16
3.469446951953613e-16	1.7347234759768065e-16
1.7347234759768065e-16	8.673617379884032e-17
8.673617379884032e-17	4.336808689942016e-17
4.336808689942016e-17	2.168404344971008e-17
2.168404344971008e-17	1.084202172485504e-17
1.084202172485504e-17	5.42101086242752e-18
5.42101086242752e-18	2.71050543121376e-18
2.71050543121376e-18	1.35525271560688e-18
1.35525271560688e-18	6.7762635780344e-19
6.7762635780344e-19	3.3881317890172e-19
3.3881317890172e-19	1.6940658945086e-19
1.6940658945086e-19	8.470329472543e-20
8.470329472543e-20	4.2351647362715e-20
4.2351647362715e-20	2.11758236813575e-20
2.11758236813575e-20	1.058791184067875e-20
1.058791184067875e-20	5.293955920339375e-21



MMM

006217 8072250

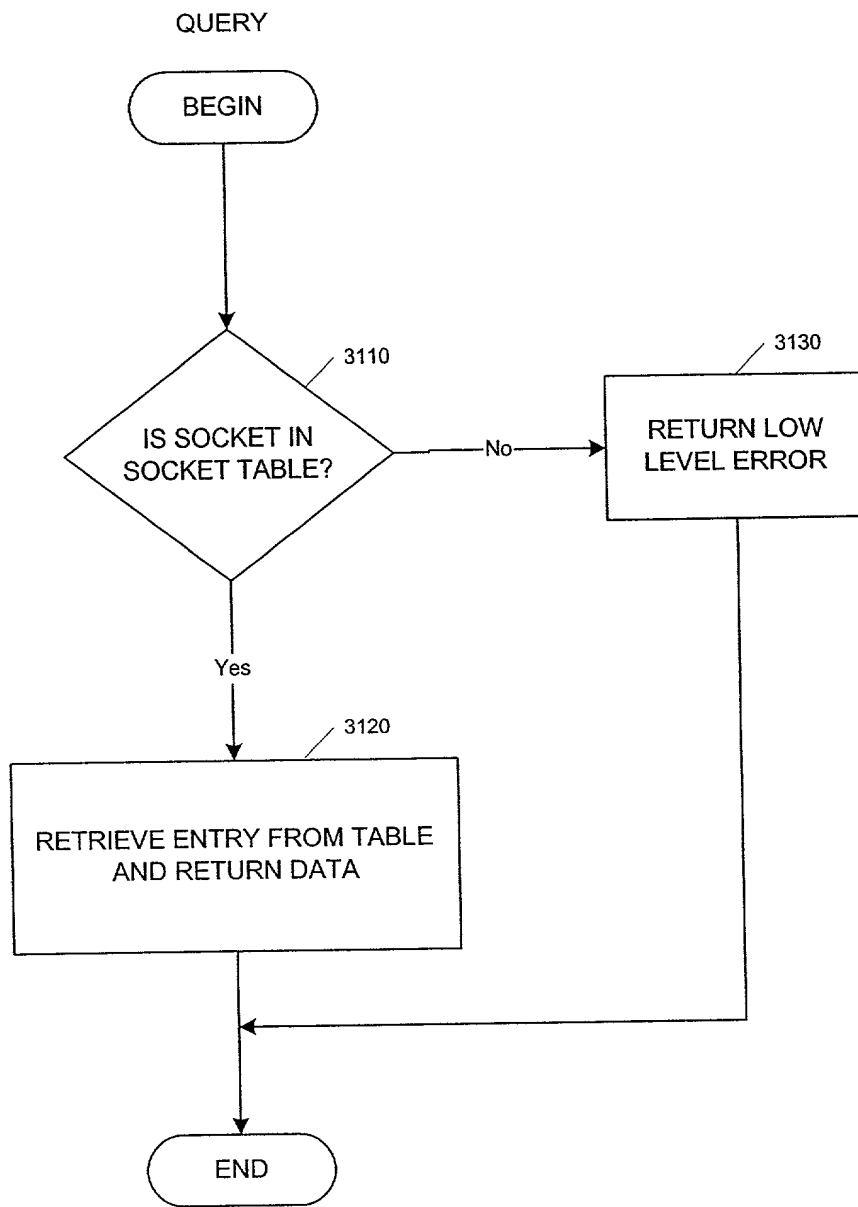


FIG. 31

NNN

00521301-1300

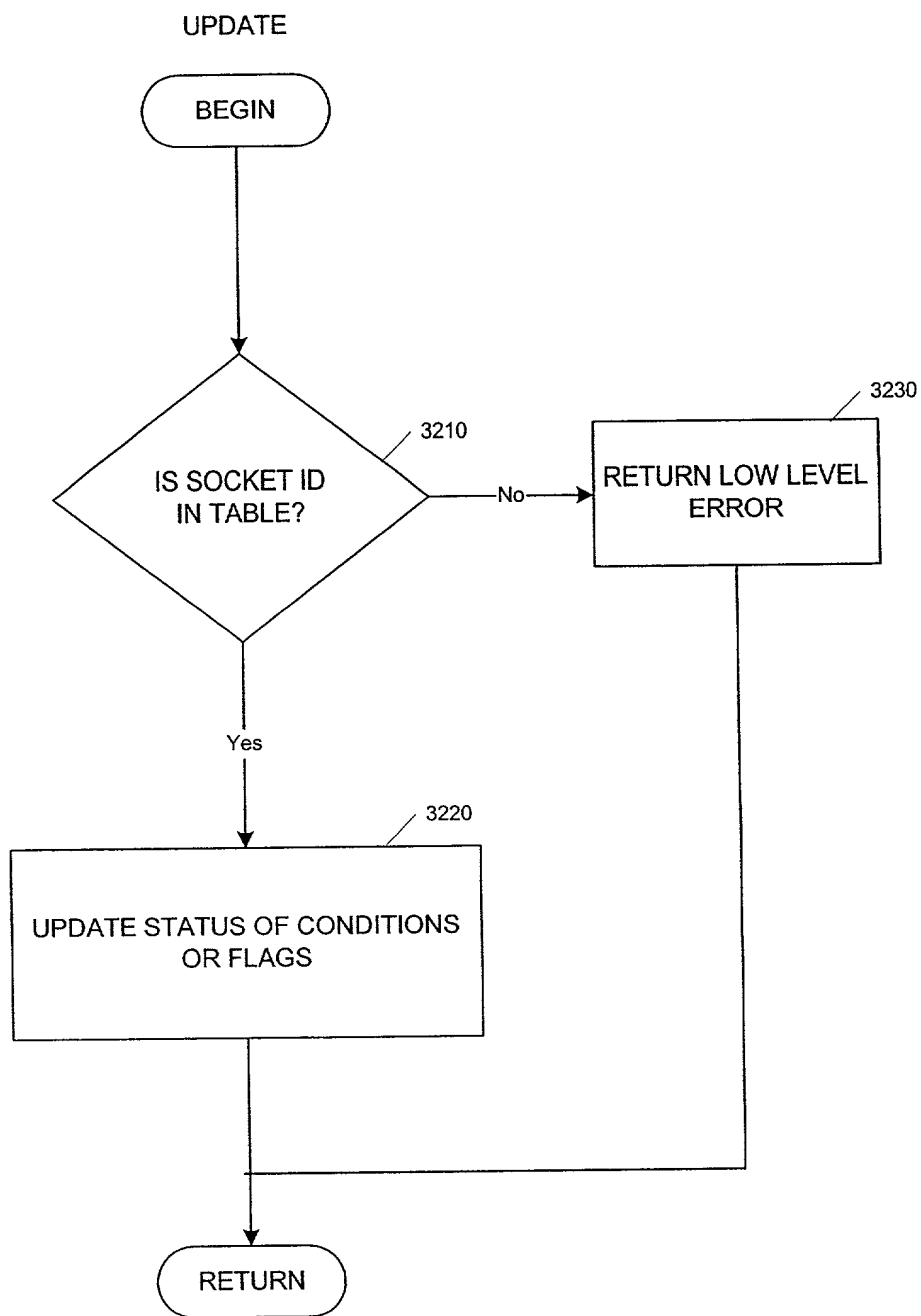


FIG. 32

N

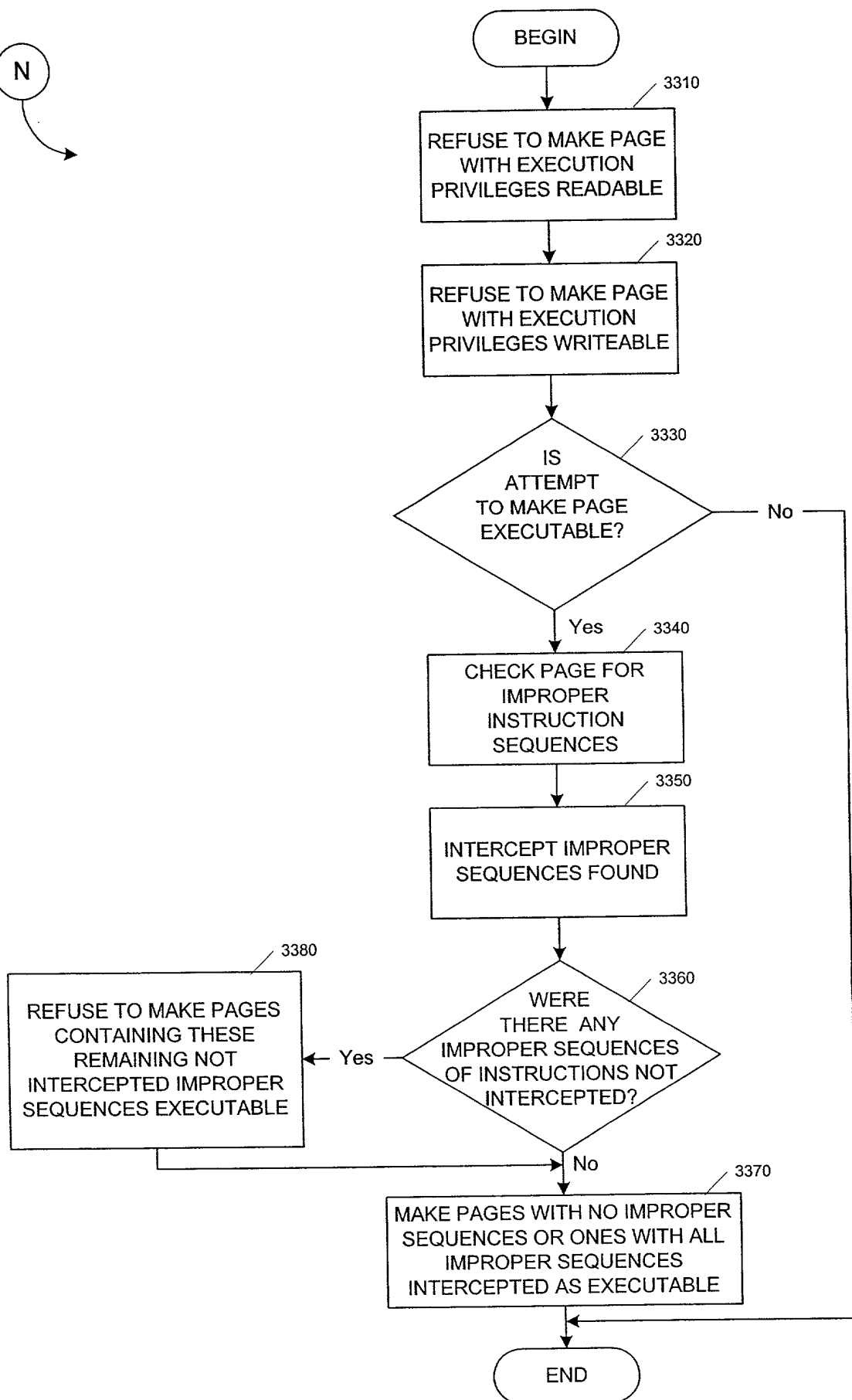


FIG. 33

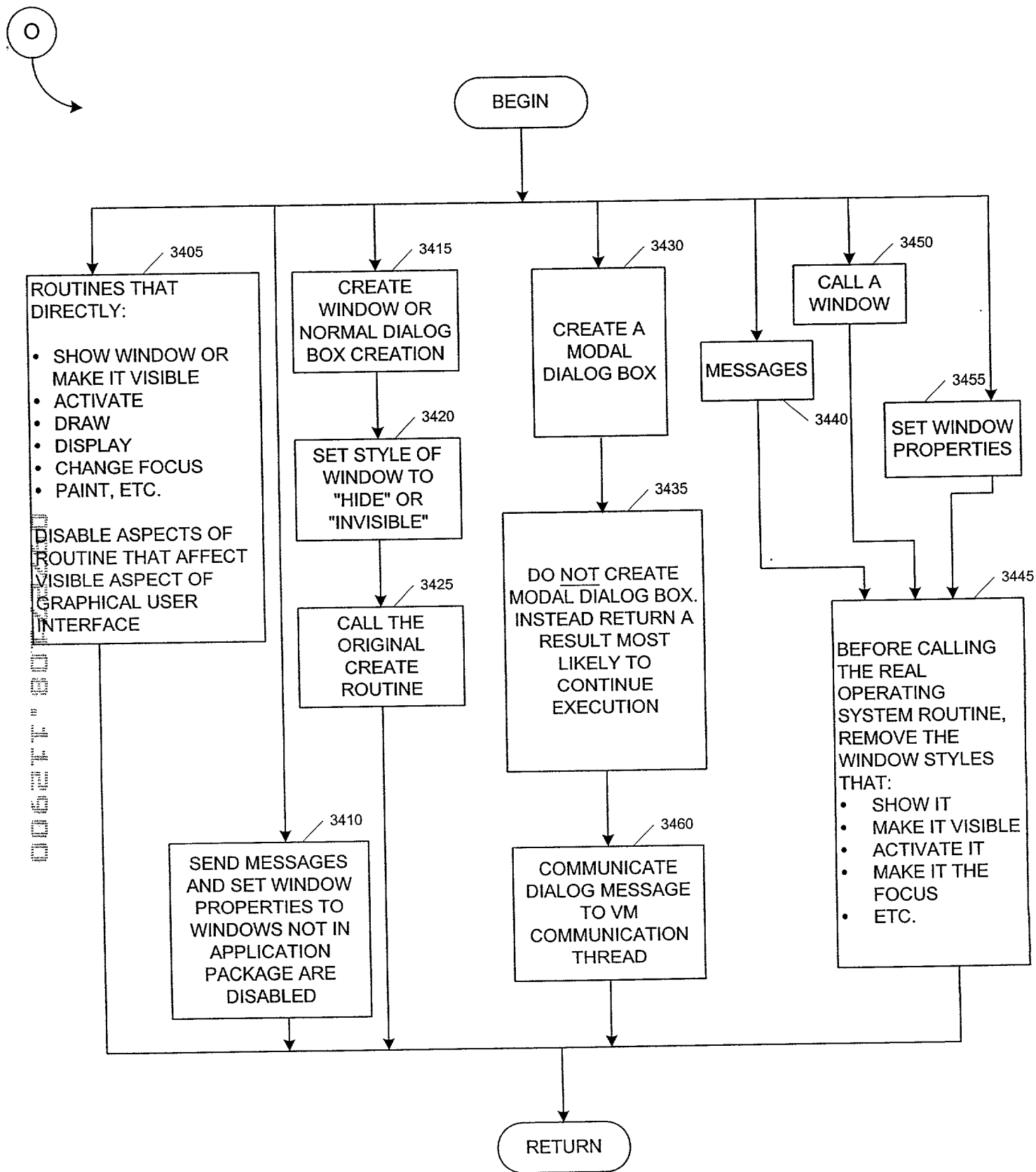


FIG. 34

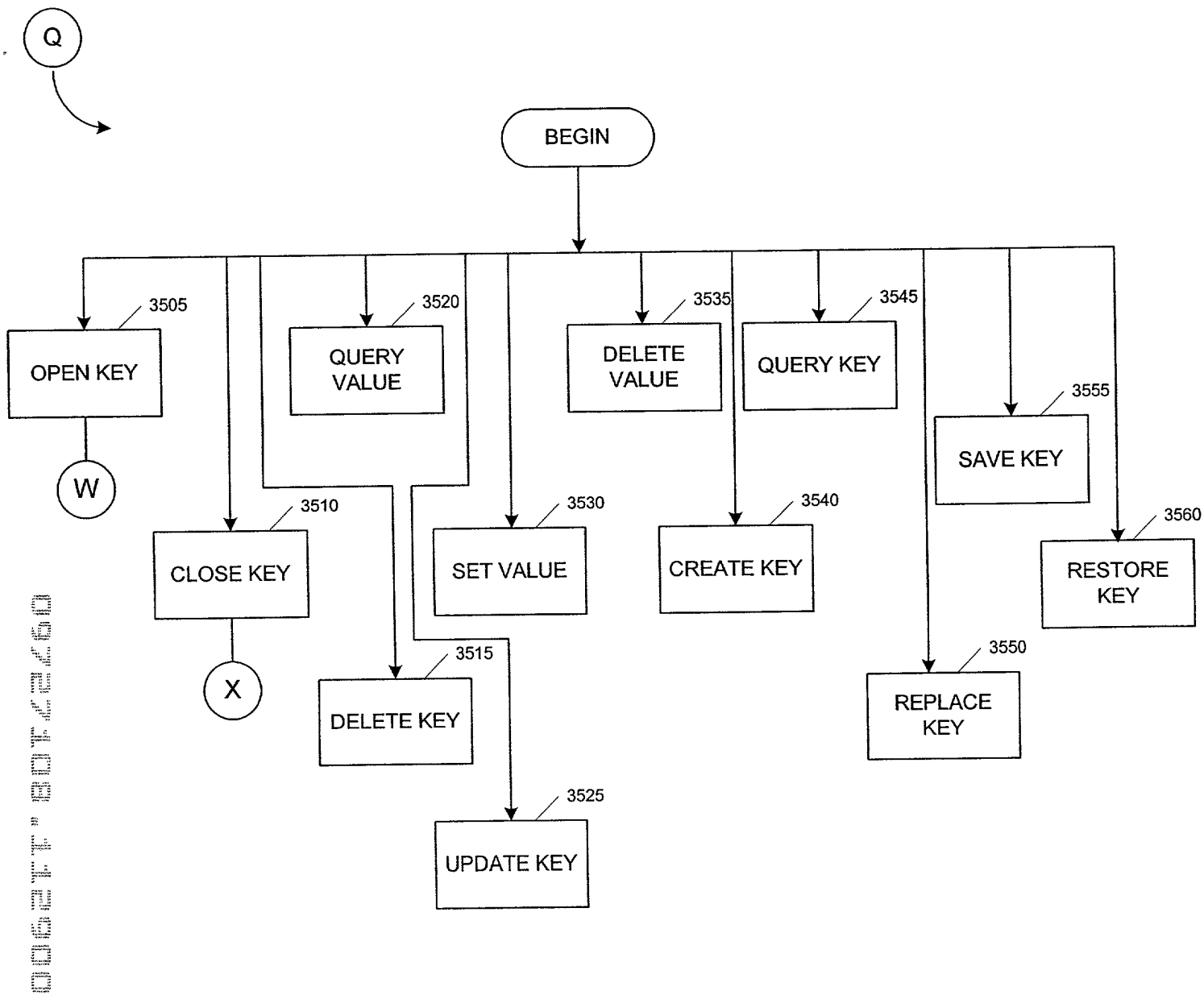


FIG. 35



FIG. 36

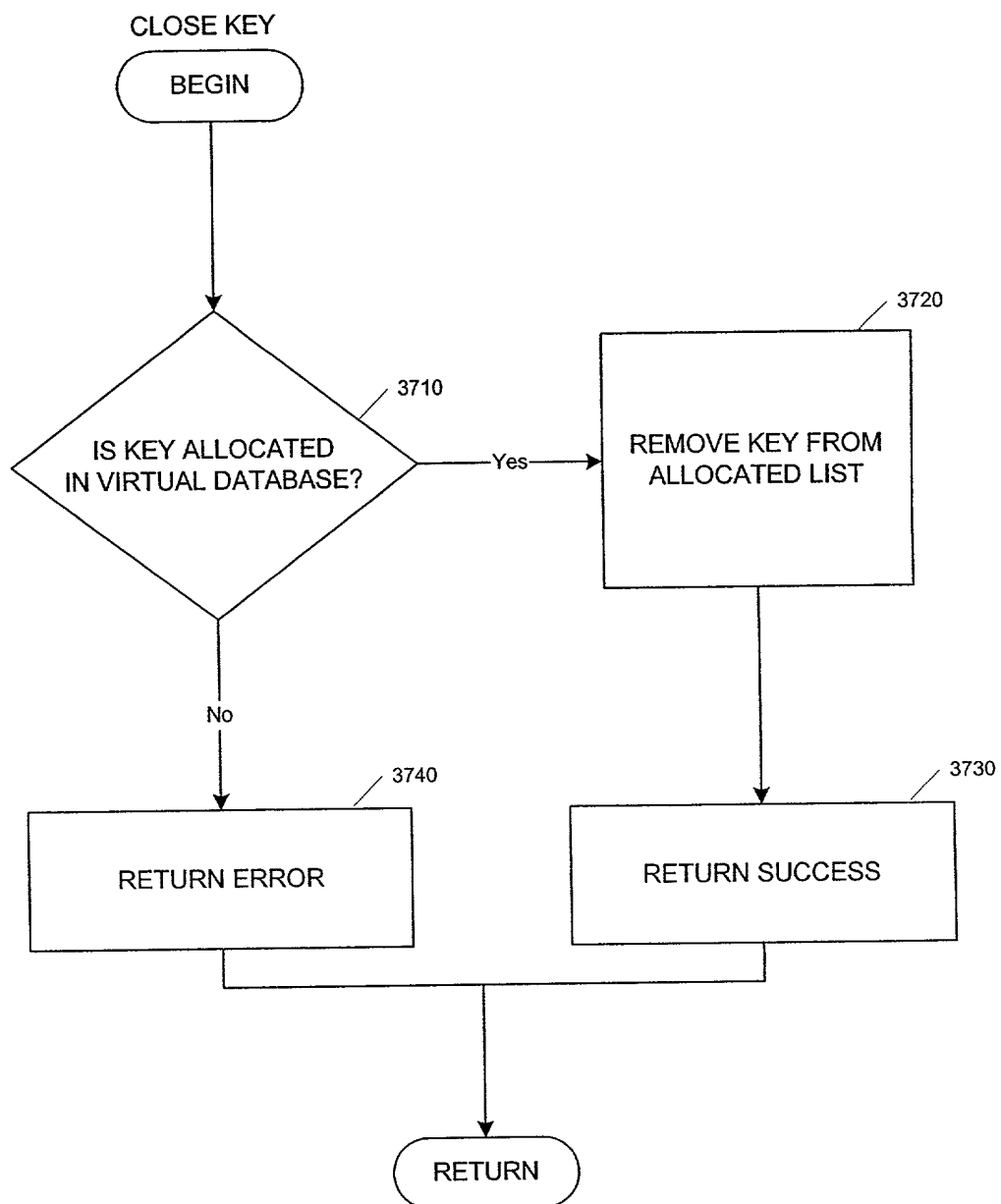
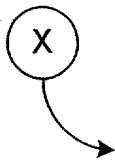


FIG. 37

R

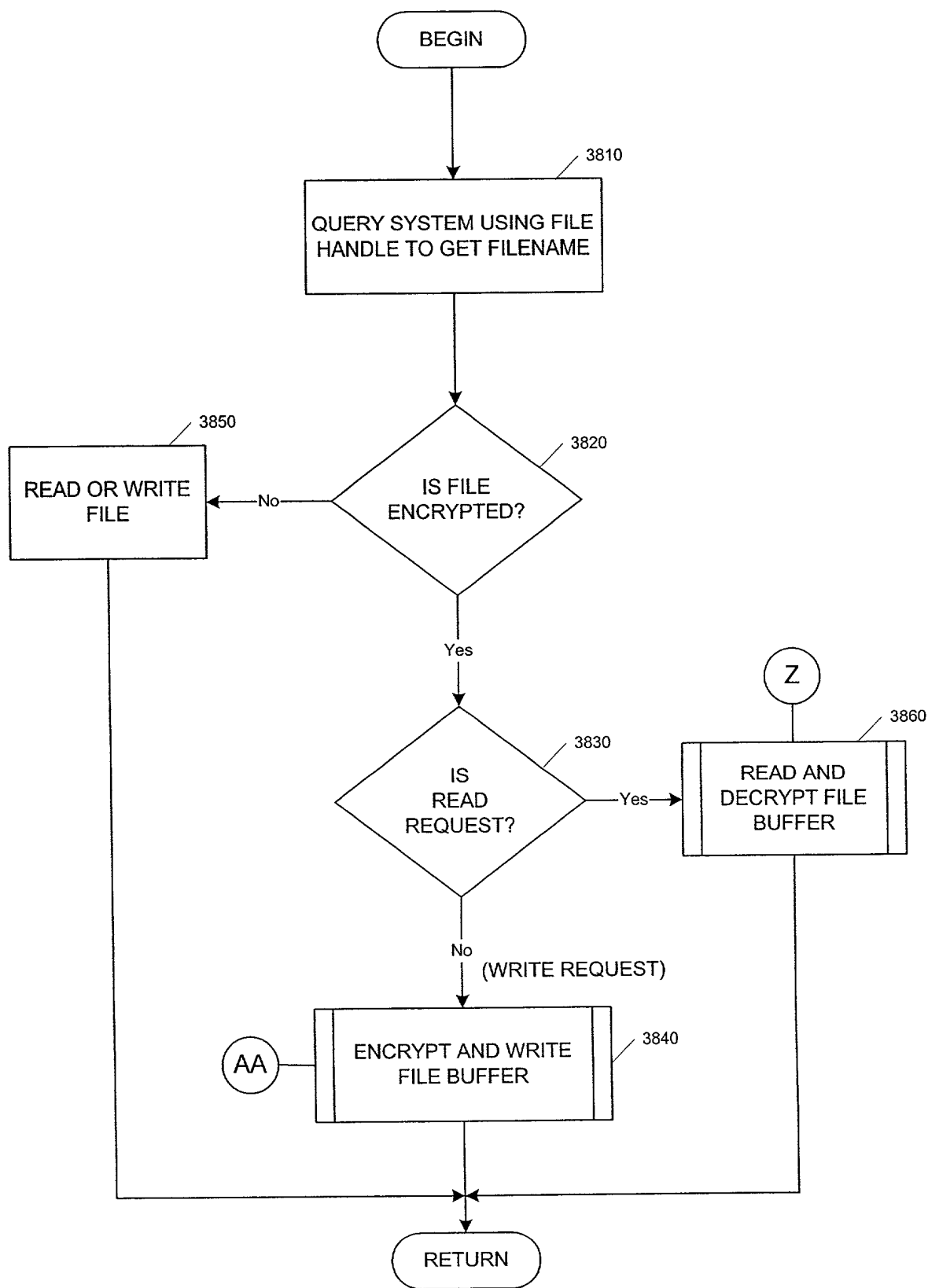


FIG. 38

Z

00527403-12900

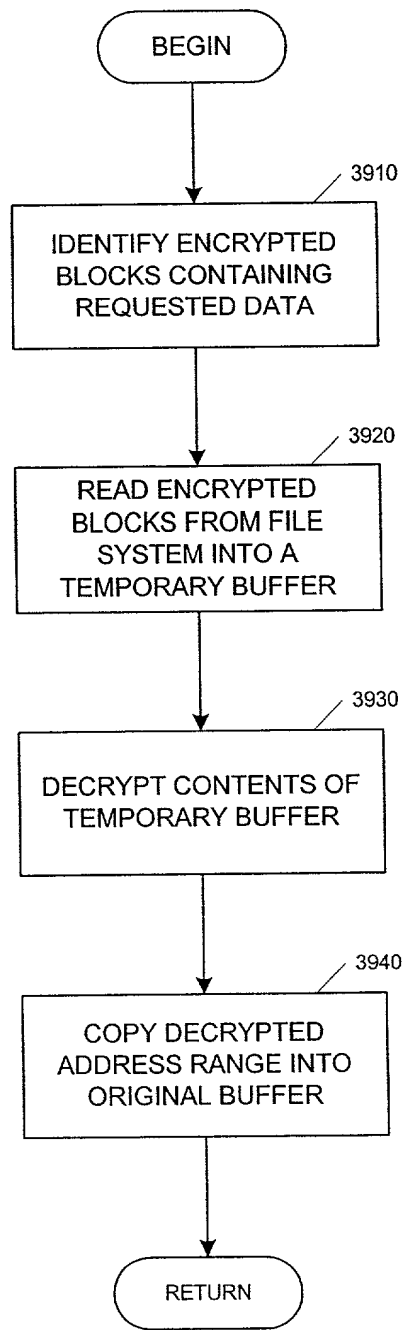


FIG. 39

AA

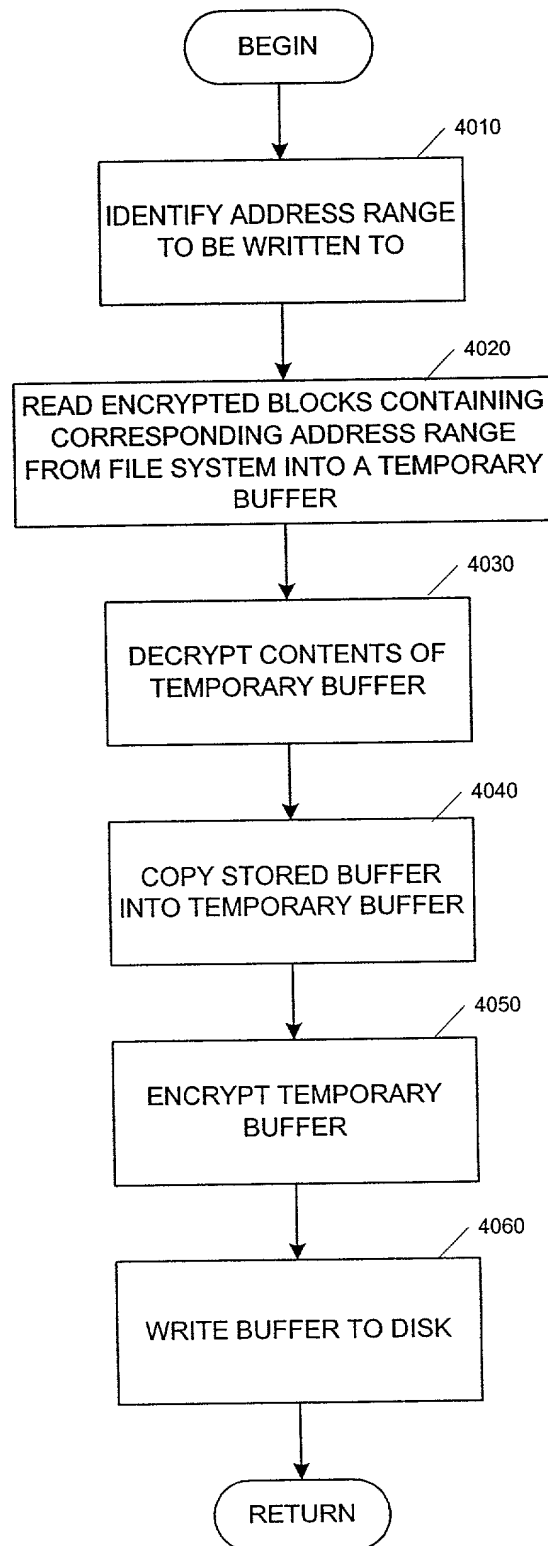


FIG. 40

S

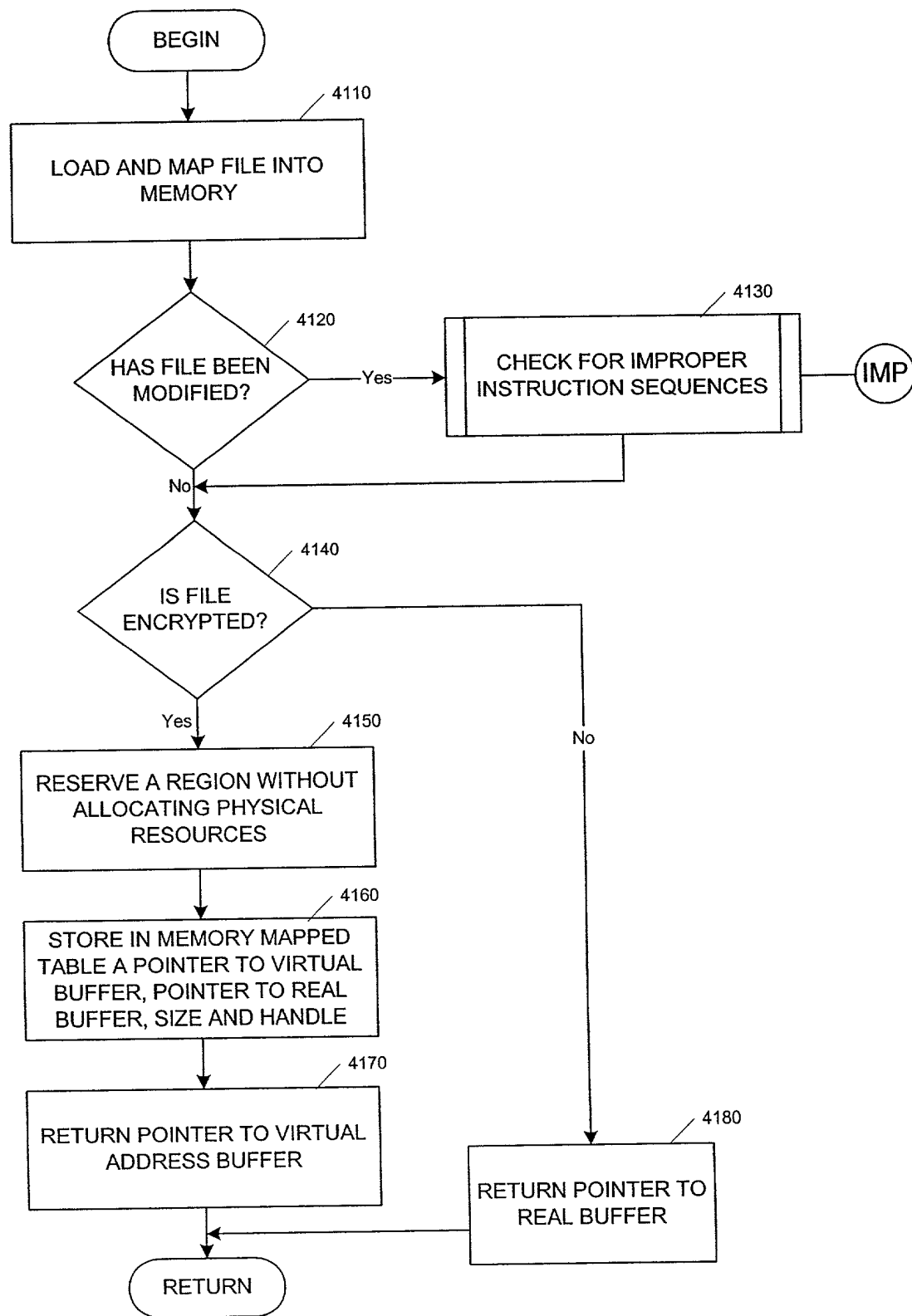


FIG. 41

S
ALTERNATE TO FIG.41)

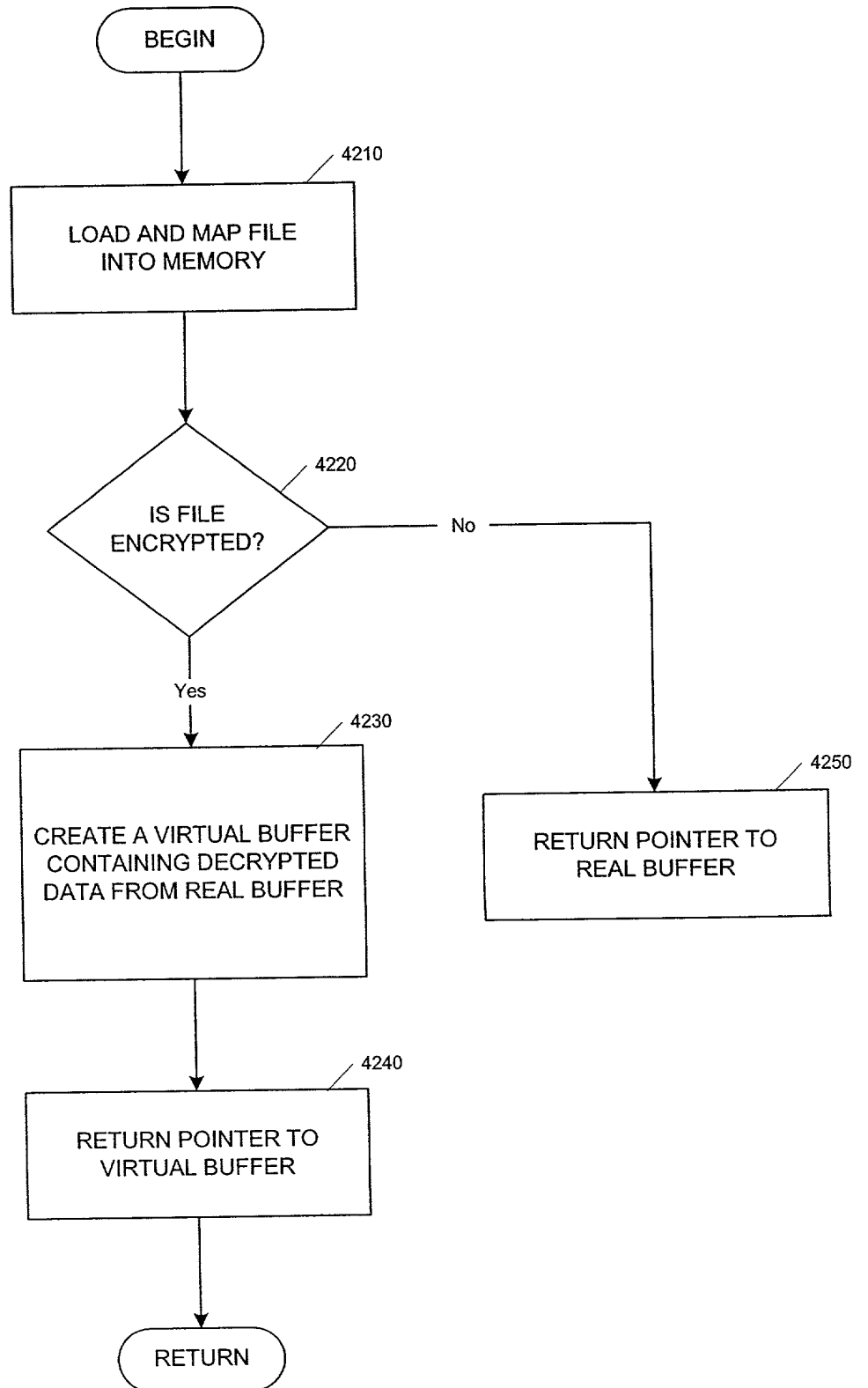


FIG. 42

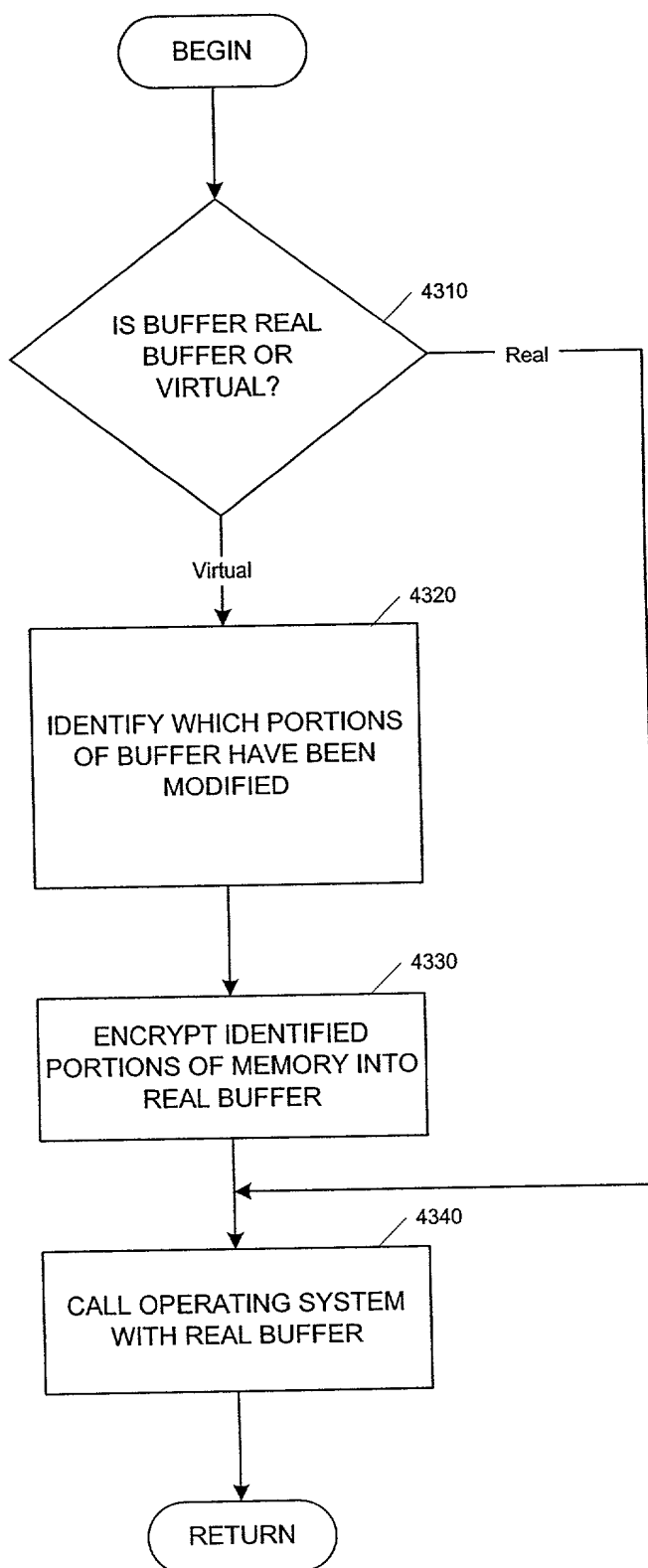


FIG. 43

U

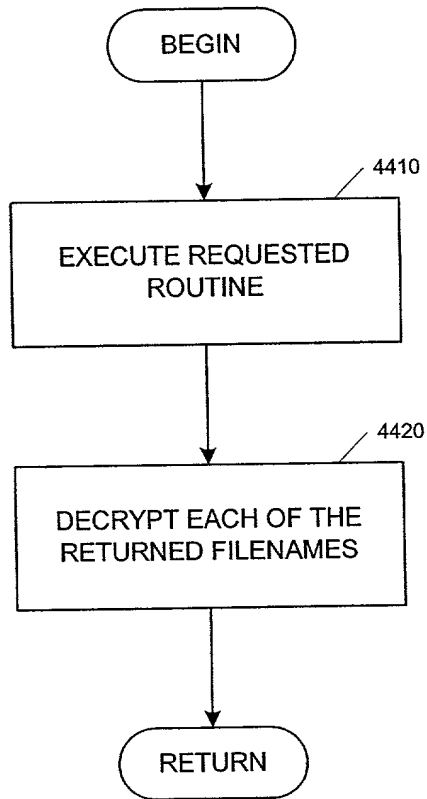


FIG. 44

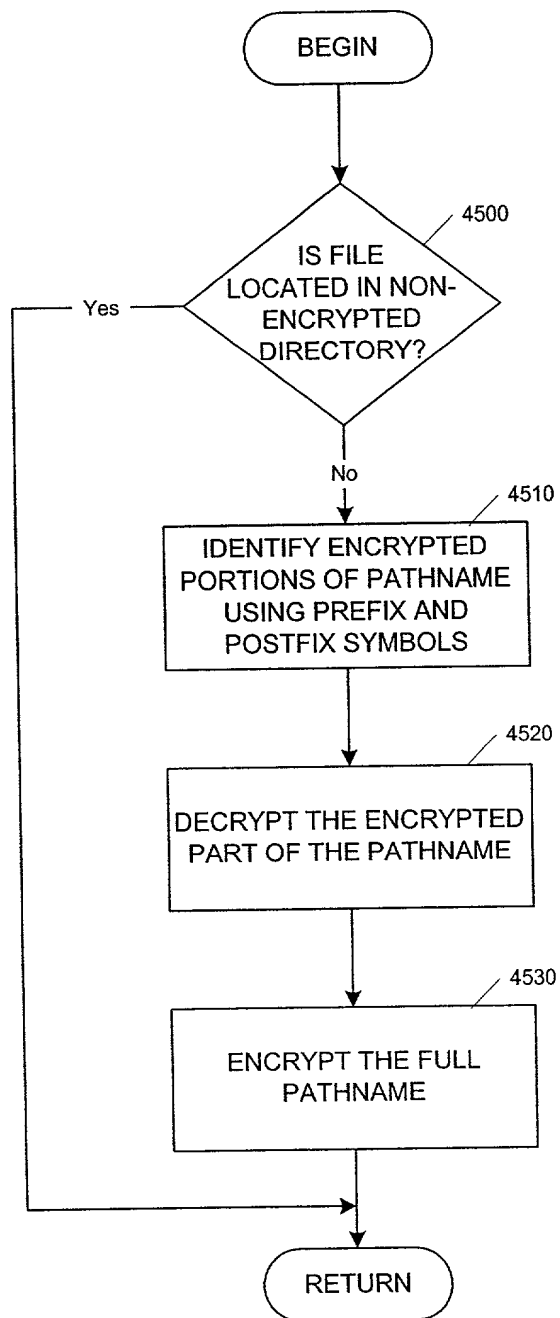


FIG. 45

TRADITIONAL
SYTEM LAYOUT

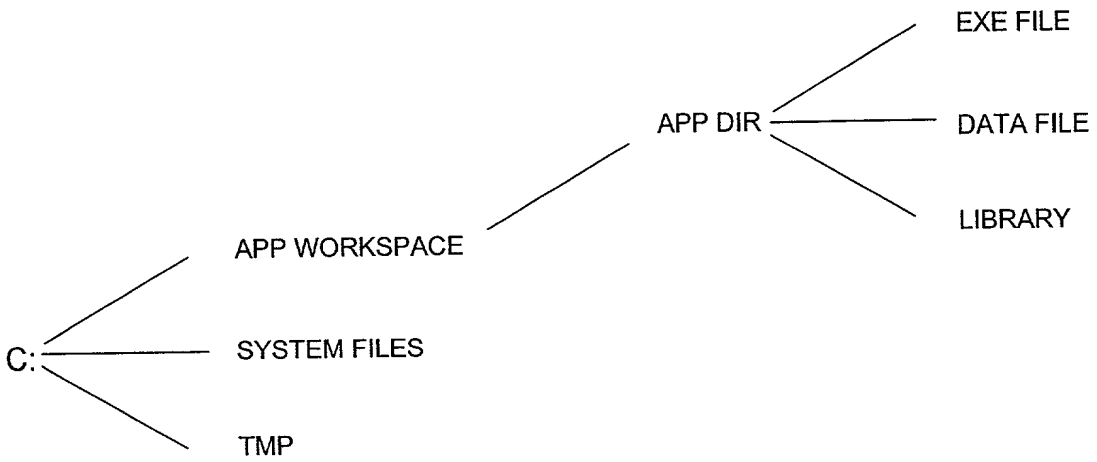


FIG. 46

VIRTUALIZED
SYSTEM LAYOUT

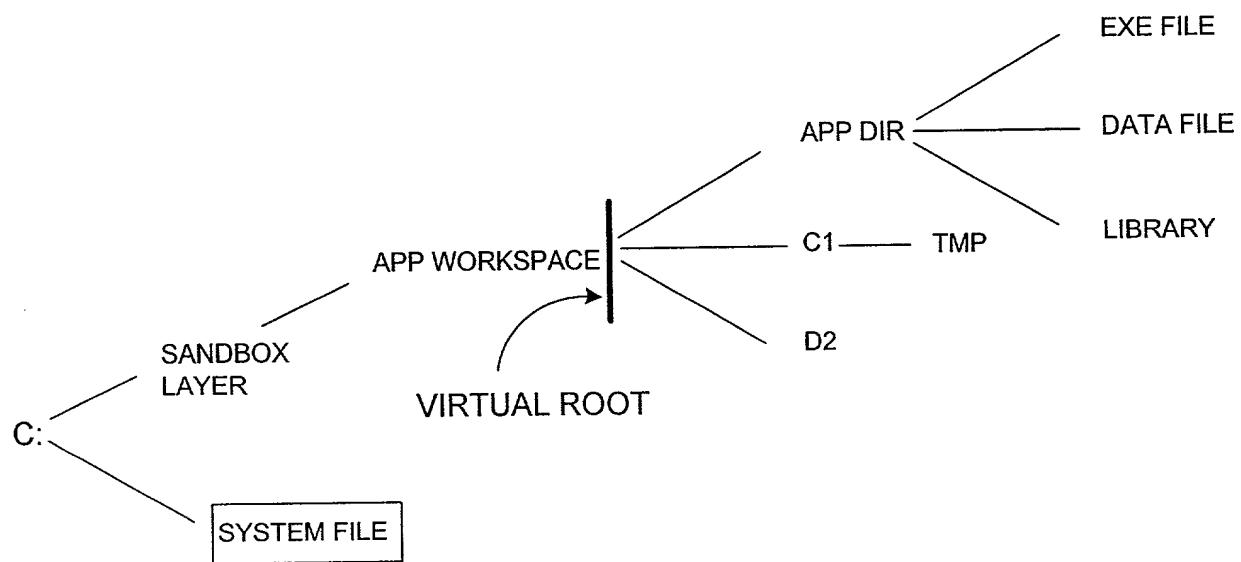


FIG. 47

OBJECT "SOCKET"

SOCKET TABLE

4804	4812	4816	4820	4824	4828	4832
"ENTRY" LOCAL SOCKET STRUCTURE	REMOTE SOCKET STRUCTURE	SOCKET STATUS	SOCKET OPTIONS	SEND QUEUE	RECEIVE QUEUE	CONNECTION QUEUE

4800



SOCKET STRUCTURE

- UNIQUE SOCKET ID
- SOCKET TYPE
- PROTOCOLS
- OPTIONS
- NETWORK ADDRESSES
- EVENT
- FAMILY
- BLOCKING

SOCKET STATUS

- UNCONNECTED
- RECEIVING
- SENDING
- LISTENING
- CONNECTED
- DISCONNECTED
- TERMINATED
- SHUTDOWN
- BOUND
- CONNECTING

FIG. 48

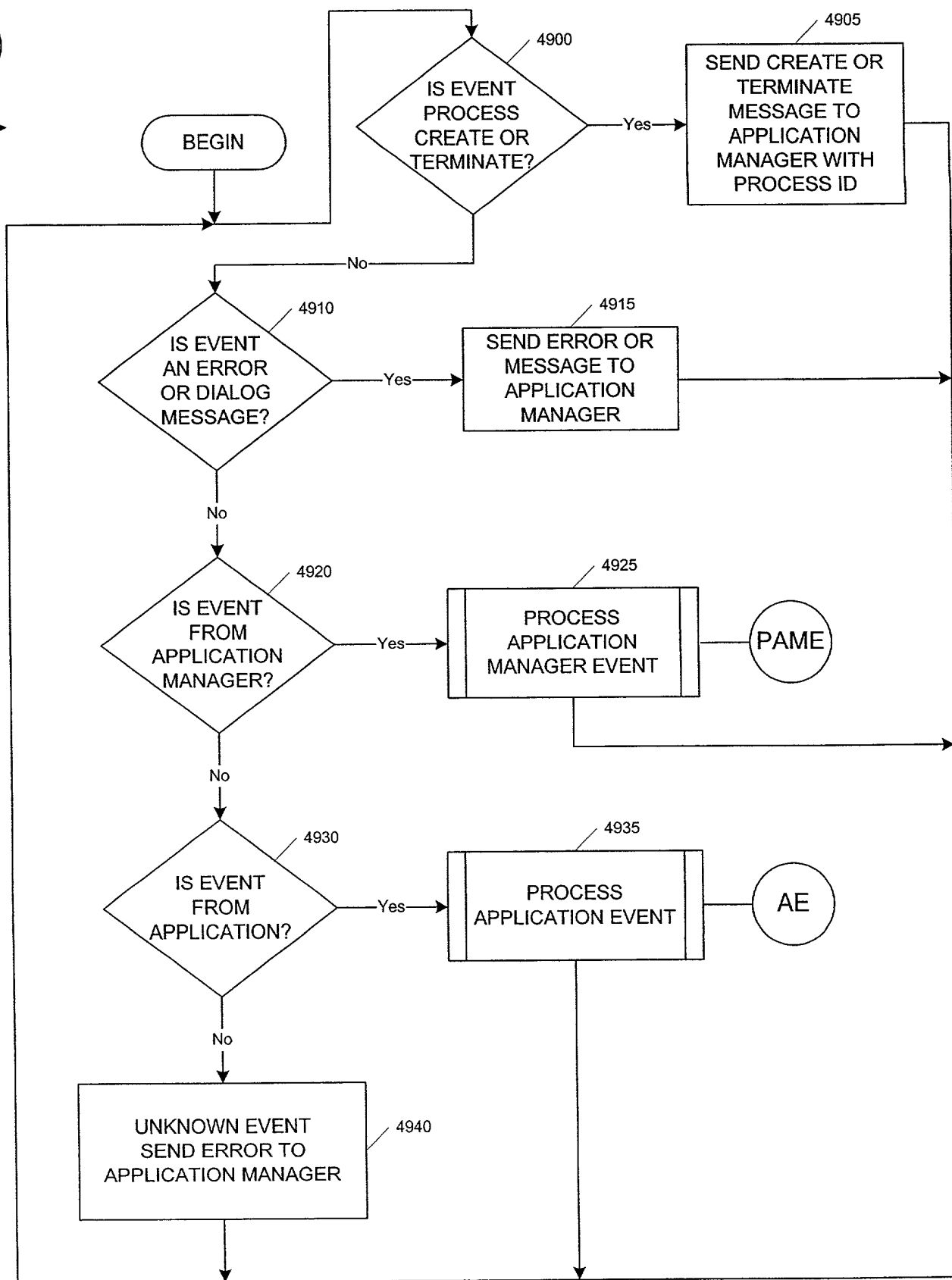
[illegible]

FIG. 49

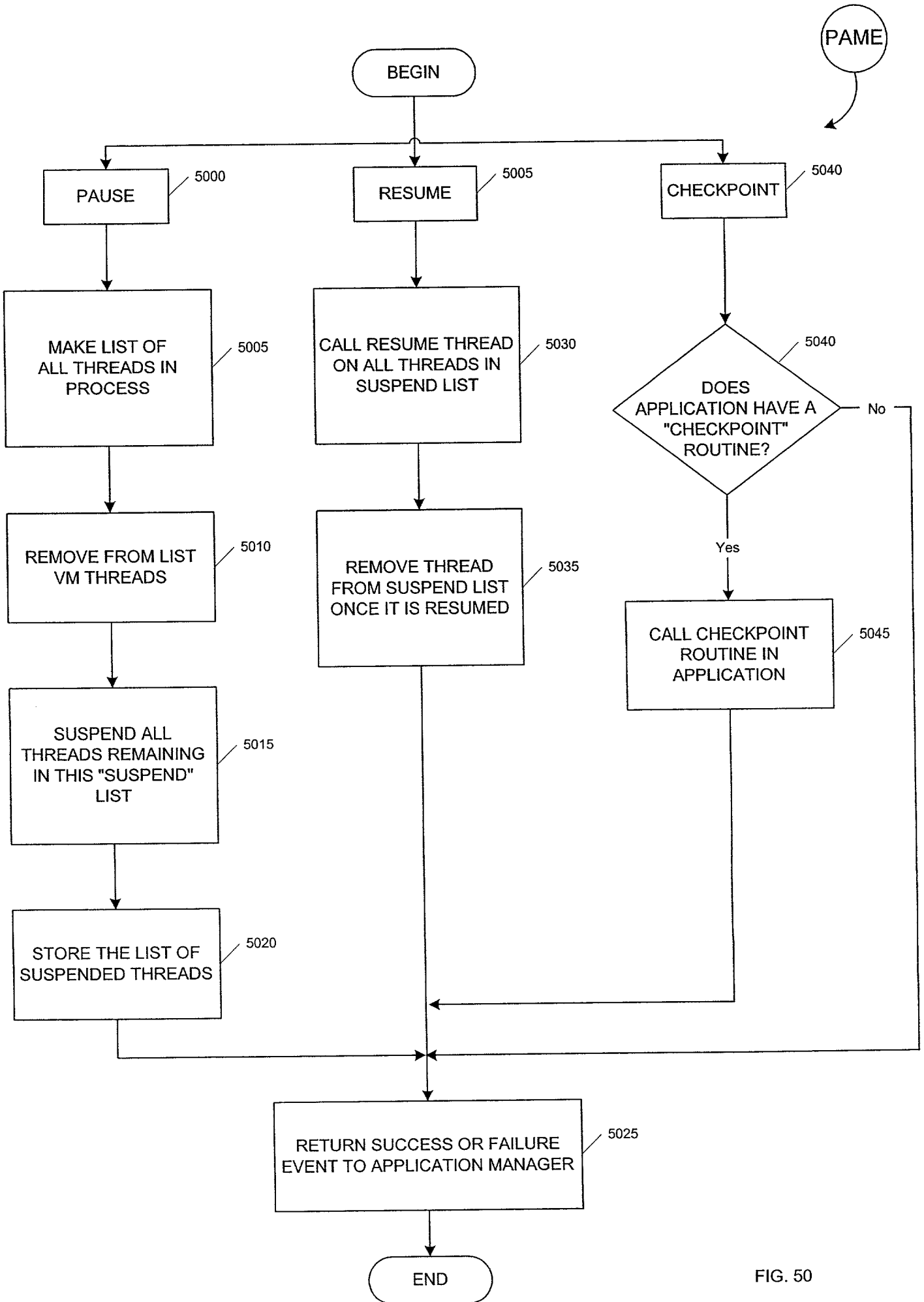


FIG. 50

1
2
3
4

AE

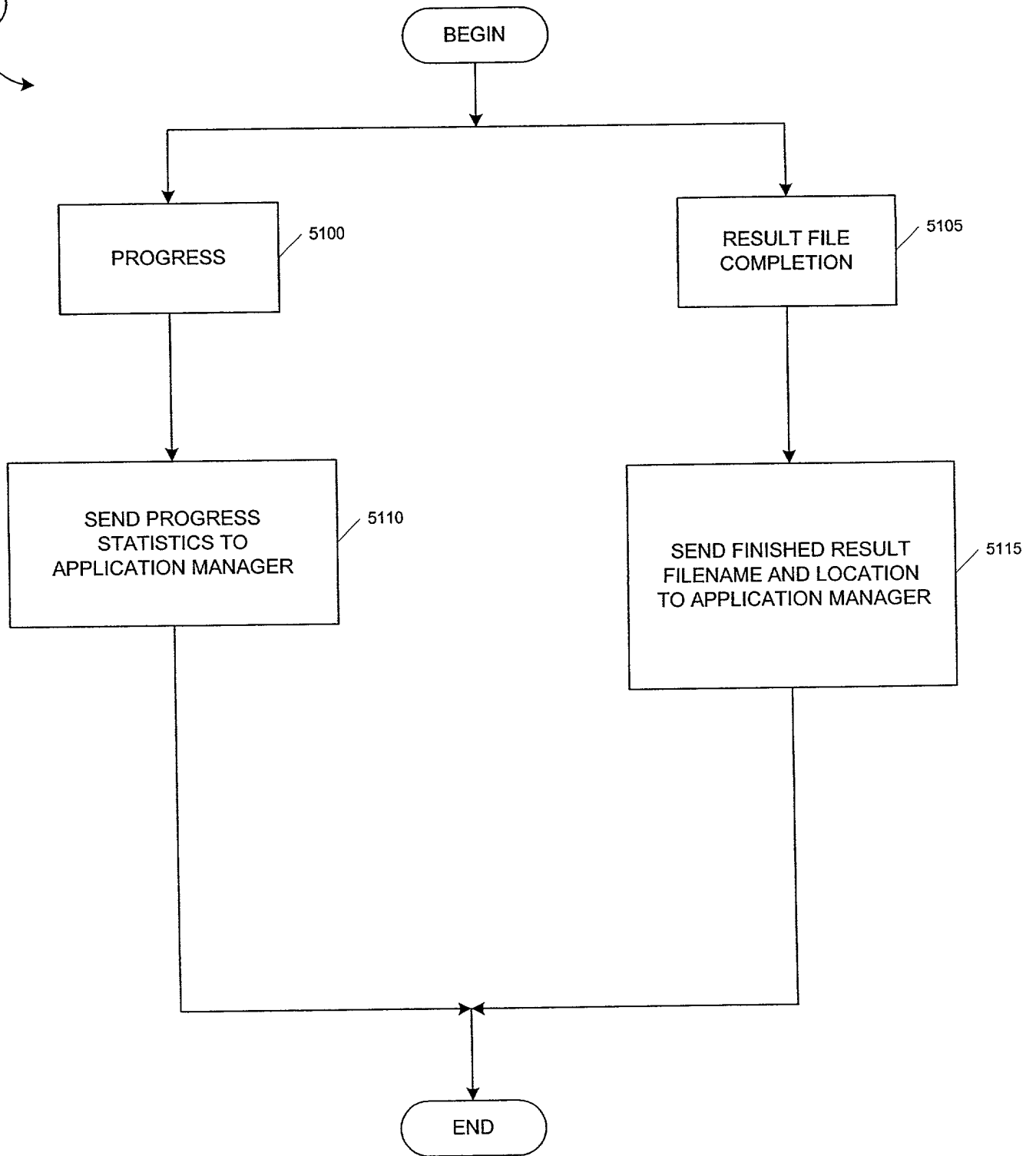


FIG. 51